

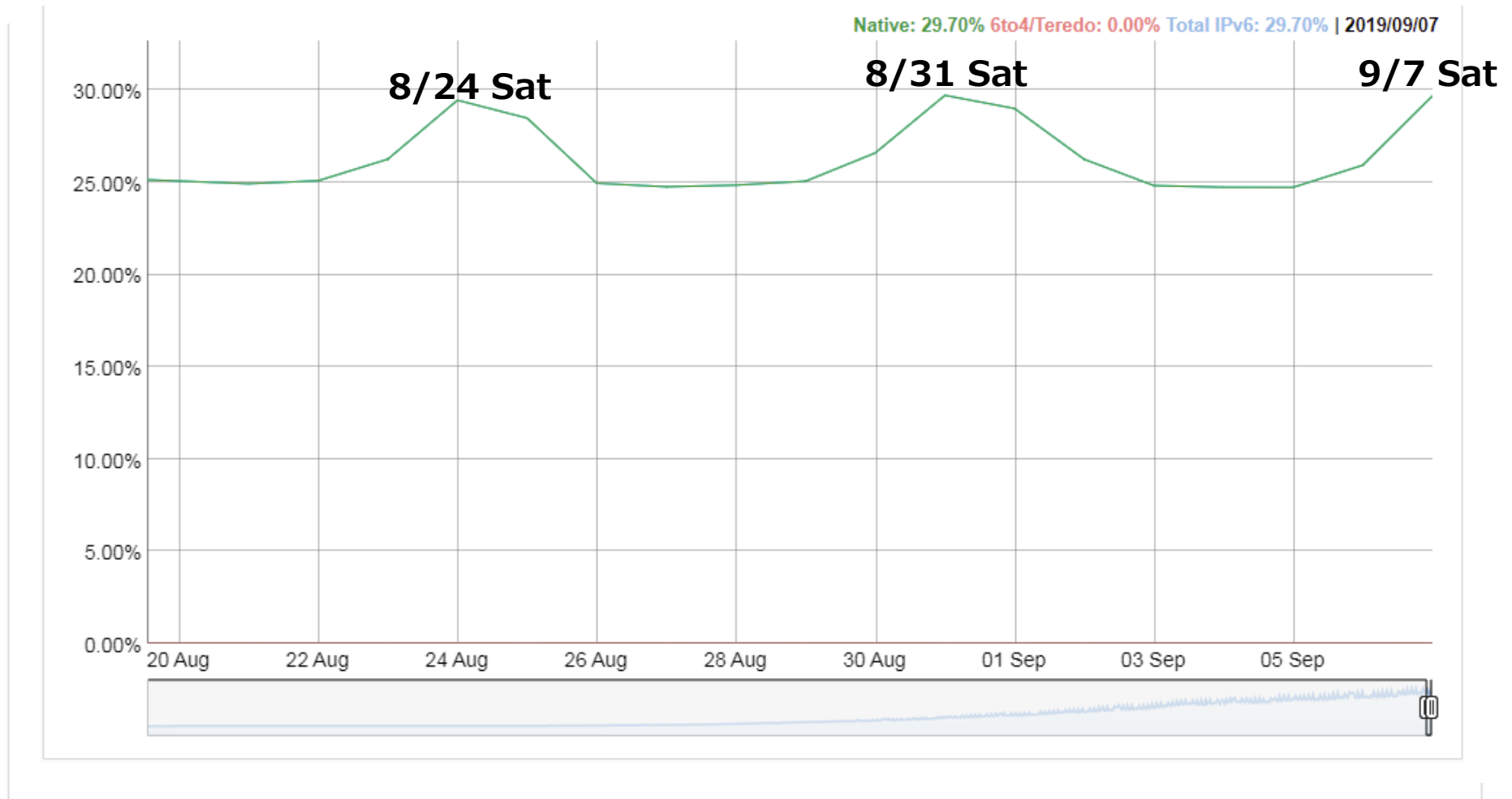
IPv6普及状況

2019年9月13日

一般社団法人日本ネットワークインフォメーションセンター(JPNIC)

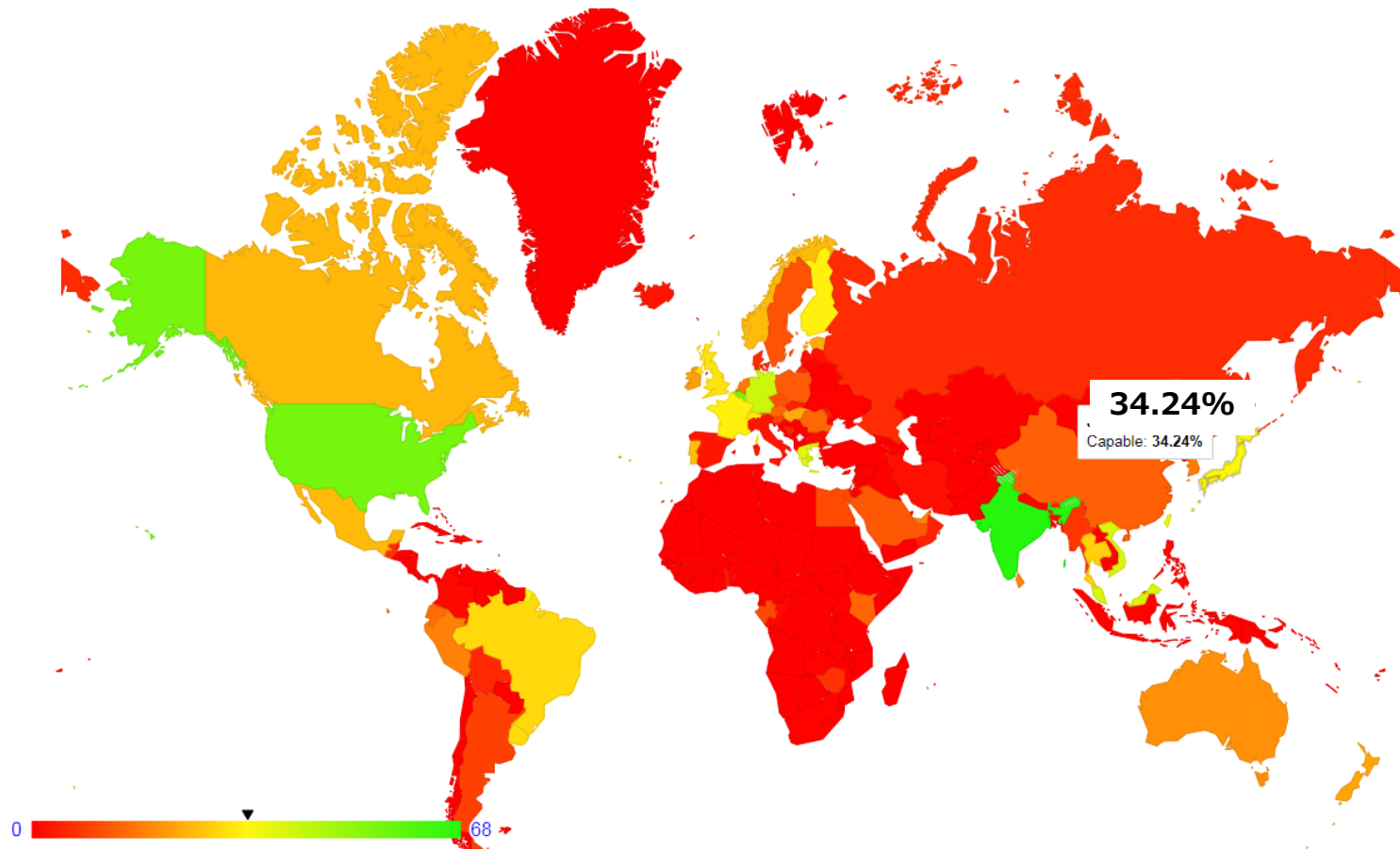
佐藤晋 (サトウススム)

GoogleによるIPv6採用状況調査



国別の状況 by APNIC

IPv6 Capable Rate by country (%)



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

国別ランキング 2019年9月

CC	Country	IPv6 Capable	IPv6 Preferred	Samples
IN	India, Southern Asia, Asia	67.87%	67.57%	54,568,688
BE	Belgium, Western Europe, Europe	57.50%	56.99%	656,208
US	United States of America, Northern America, Americas	55.34%	54.58%	25,210,534
YT	Mayotte, Eastern Africa, Africa	51.41%	51.14%	9,055
DE	Germany, Western Europe, Europe	41.85%	41.29%	3,762,162
MY	Malaysia, South-Eastern Asia, Asia	39.93%	39.45%	3,677,785
VN	Vietnam, South-Eastern Asia, Asia	39.32%	38.51%	4,292,955
GR	Greece, Southern Europe, Europe	38.79%	38.57%	1,276,077
TW	Taiwan, Eastern Asia, Asia	36.47%	34.10%	2,292,433
BL	Saint Barthelemy, Caribbean, Americas	35.54%	35.54%	166
GF	French Guiana, South America, Americas	35.10%	34.96%	32,301
JP	Japan, Eastern Asia, Asia	34.24%	32.26%	3,377,201
FR	France, Western Europe, Europe	33.17%	32.57%	4,456,419
FI	Finland, Northern Europe, Europe	33.14%	31.98%	253,313
GB	United Kingdom of Great Britain and Northern Ireland, Northern Europe, Europe	31.34%	30.95%	3,156,354
CH	Switzerland, Western Europe, Europe	31.27%	30.85%	311,208
LU	Luxembourg, Western Europe, Europe	30.57%	30.36%	64,131
UY	Uruguay, South America, Americas	30.52%	30.30%	283,619
BR	Brazil, South America, Americas	30.02%	29.26%	8,393,247
TH	Thailand, South-Eastern Asia, Asia	28.72%	28.29%	2,285,564

2014年

CC	Country	IPv6 Capable	IPv6 Preferred	Samples
BE	Belgium, Western Europe, Europe	24.70%	23.19%	34,646
DE	Germany, Western Europe, Europe	10.69%	10.01%	132,624
CH	Switzerland, Western Europe, Europe	10.66%	9.77%	19,627
RO	Romania, Eastern Europe, Europe	9.53%	9.10%	575,340
LU	Luxembourg, Western Europe, Europe	8.73%	7.69%	2,613
US	United States of America, Northern America, Americas	7.71%	7.10%	710,721
SG	Singapore, South-Eastern Asia, Asia	6.71%	5.31%	38,120
PE	Peru, South America, Americas	6.59%	6.23%	1,140,614
FR	France, Western Europe, Europe	5.40%	5.10%	216,469
JP	Japan, Eastern Asia, Asia	5.14%	4.89%	274,899
CZ	Czech Republic, Eastern Europe, Europe	4.94%	4.72%	95,159
NO	Norway, Northern Europe, Europe	3.43%	3.05%	9,043
VU	Vanuatu, Melanesia, Oceania	3.02%	2.20%	364
MY	Malaysia, South-Eastern Asia, Asia	2.20%	1.93%	170,307
PT	Portugal, Southern Europe, Europe	1.84%	1.77%	71,678
BT	Bhutan, Southern Asia, Asia	1.64%	1.43%	1,464
NL	Netherlands, Western Europe, Europe	1.57%	1.48%	45,281
CN	China, Eastern Asia, Asia	1.46%	1.24%	1,809,064
BA	Bosnia and Herzegovina, Southern Europe, Europe	1.44%	1.40%	238,315
EU	European Union, Western Europe, Europe	1.41%	1.36%	1,985

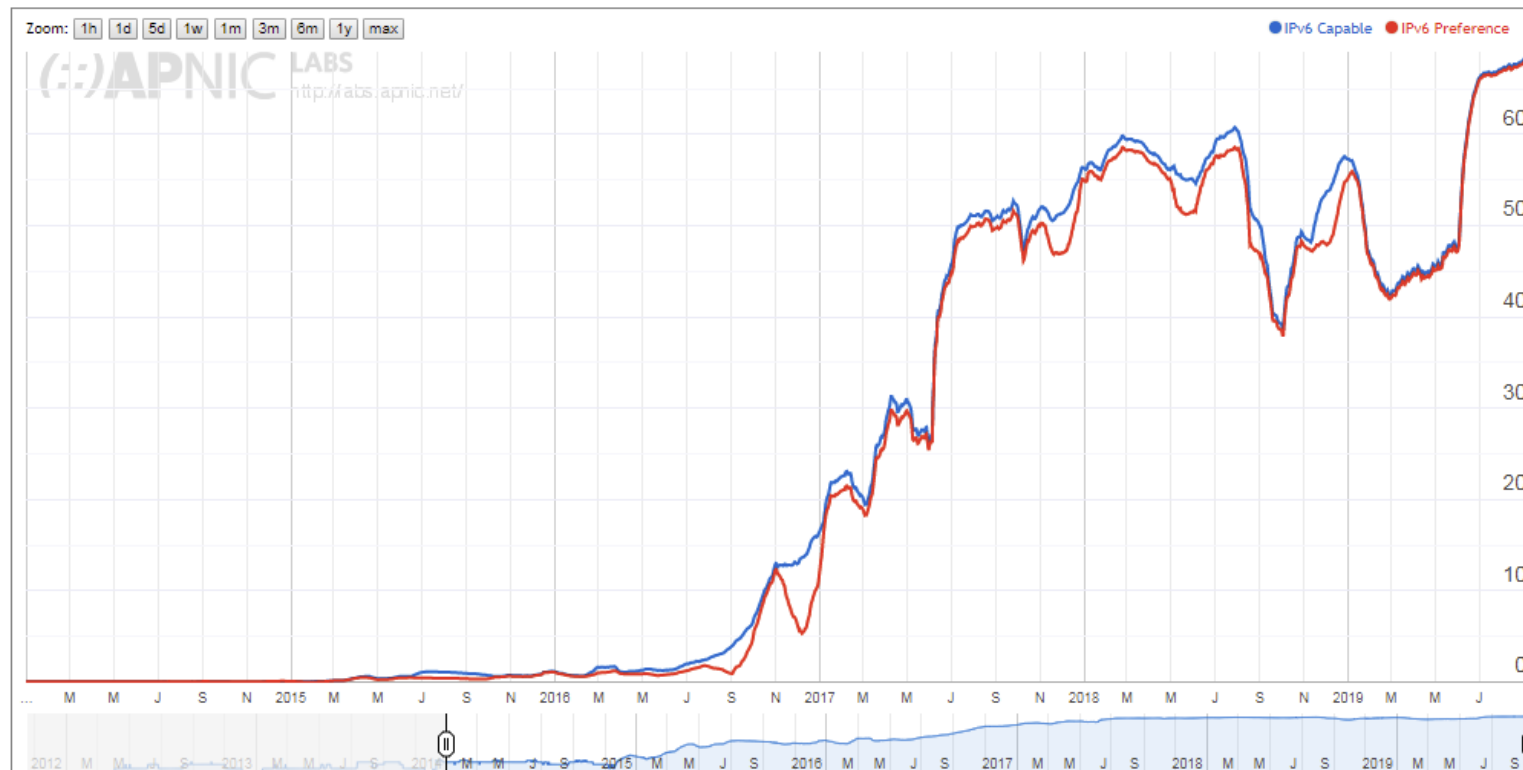
CC	Country	IPv6 Capable	IPv6 Preferred	Samples
BE	Belgium, Western Europe, Europe	55.16%	53.95%	3,000,410
DE	Germany, Western Europe, Europe	43.02%	41.98%	8,627,352
CH	Switzerland, Western Europe, Europe	35.12%	33.99%	2,131,333
US	United States of America, Northern America, Americas	33.53%	31.41%	84,378,988
GR	Greece, Southern Europe, Europe	33.09%	32.58%	4,743,780
LU	Luxembourg, Western Europe, Europe	31.05%	29.97%	265,480
PT	Portugal, Southern Europe, Europe	26.36%	25.86%	5,683,916
IN	India, Southern Asia, Asia	25.12%	23.70%	29,996,150
GB	United Kingdom of Great Britain and Northern Ireland, Northern Europe, Europe	24.93%	23.81%	10,820,327
JP	Japan, Eastern Asia, Asia	21.94%	19.00%	5,427,280
IE	Ireland, Northern Europe, Europe	19.73%	19.47%	2,005,931
FR	France, Western Europe, Europe	18.66%	18.29%	30,030,358
CA	Canada, Northern America, Americas	18.38%	17.02%	7,620,530
EC	Ecuador, South America, Americas	17.84%	16.91%	2,599,609
PE	Peru, South America, Americas	17.73%	17.28%	3,604,675
EE	Estonia, Northern Europe, Europe	16.86%	16.57%	744,063
MY	Malaysia, South-Eastern Asia, Asia	15.63%	13.71%	6,545,591
NO	Norway, Northern Europe, Europe	15.05%	14.12%	1,075,059
AU	Australia, Australia and New Zealand, Oceania	14.60%	13.98%	3,527,065
TT	Trinidad and Tobago, Caribbean, Americas	14.24%	13.97%	815,089
BR	Brazil, South America, Americas	14.10%	13.63%	5,825,257
FI	Finland, Northern Europe, Europe	12.56%	11.76%	584,895
CZ	Czech Republic, Eastern Europe, Europe	11.07%	9.82%	1,159,243
NL	Netherlands, Western Europe, Europe	10.31%	9.93%	5,608,915

国別ランキング 2019年9月

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アジア各国の状況 -インド-

Use of IPv6 for India (IN)



2016年後半から急増→Reliance Jioの対応（ユーザー数2億人以上）
政府のロードマップ改訂も大体同じ時期

アジア各国の状況 -マレーシア-

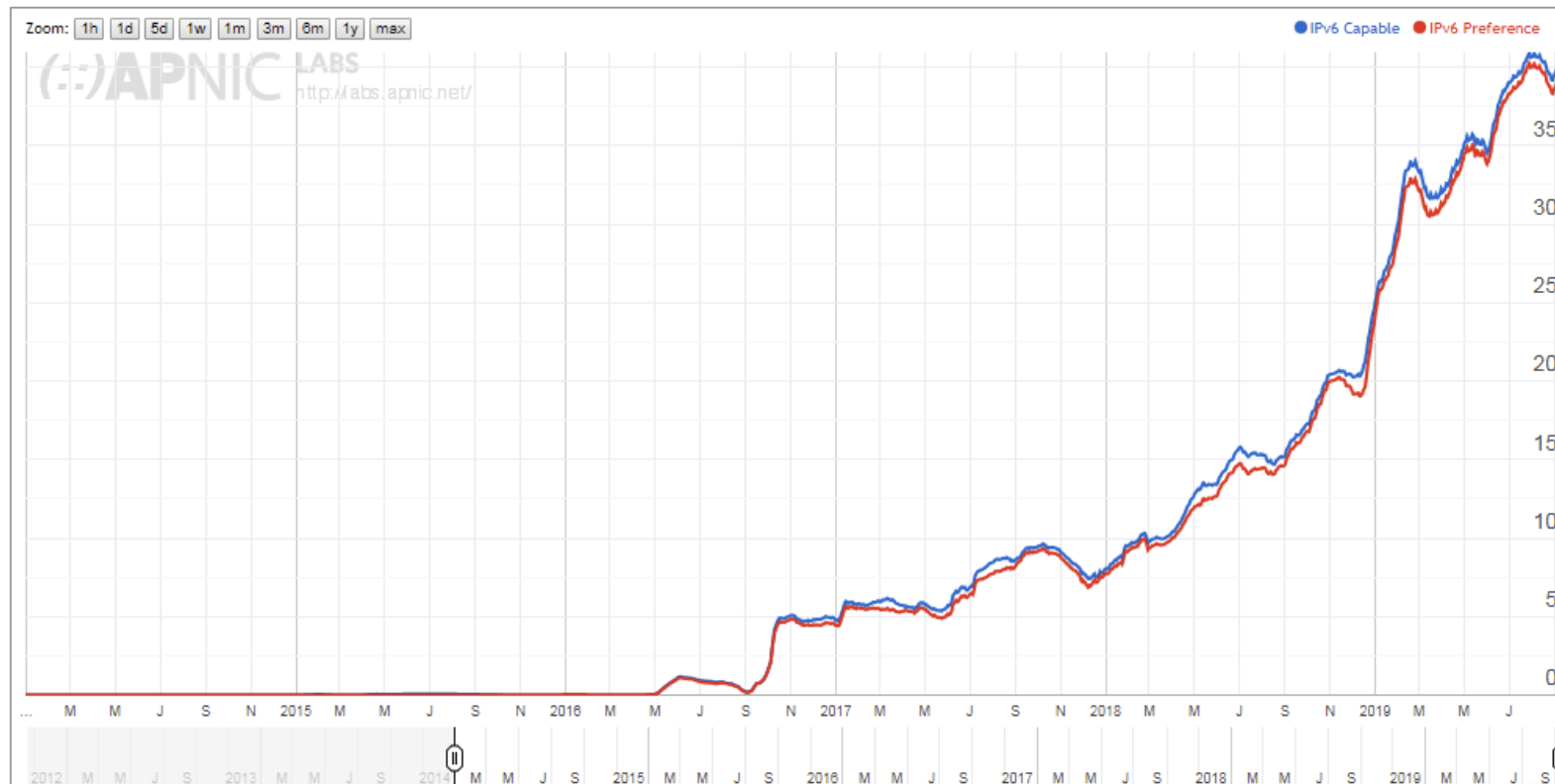
Use of IPv6 for Malaysia (MY)



2015年頃よりテレコムマレーシアがリード
固定、モバイル、公衆WiFiの対応も推進

アジア各国の状況 -ベトナム-

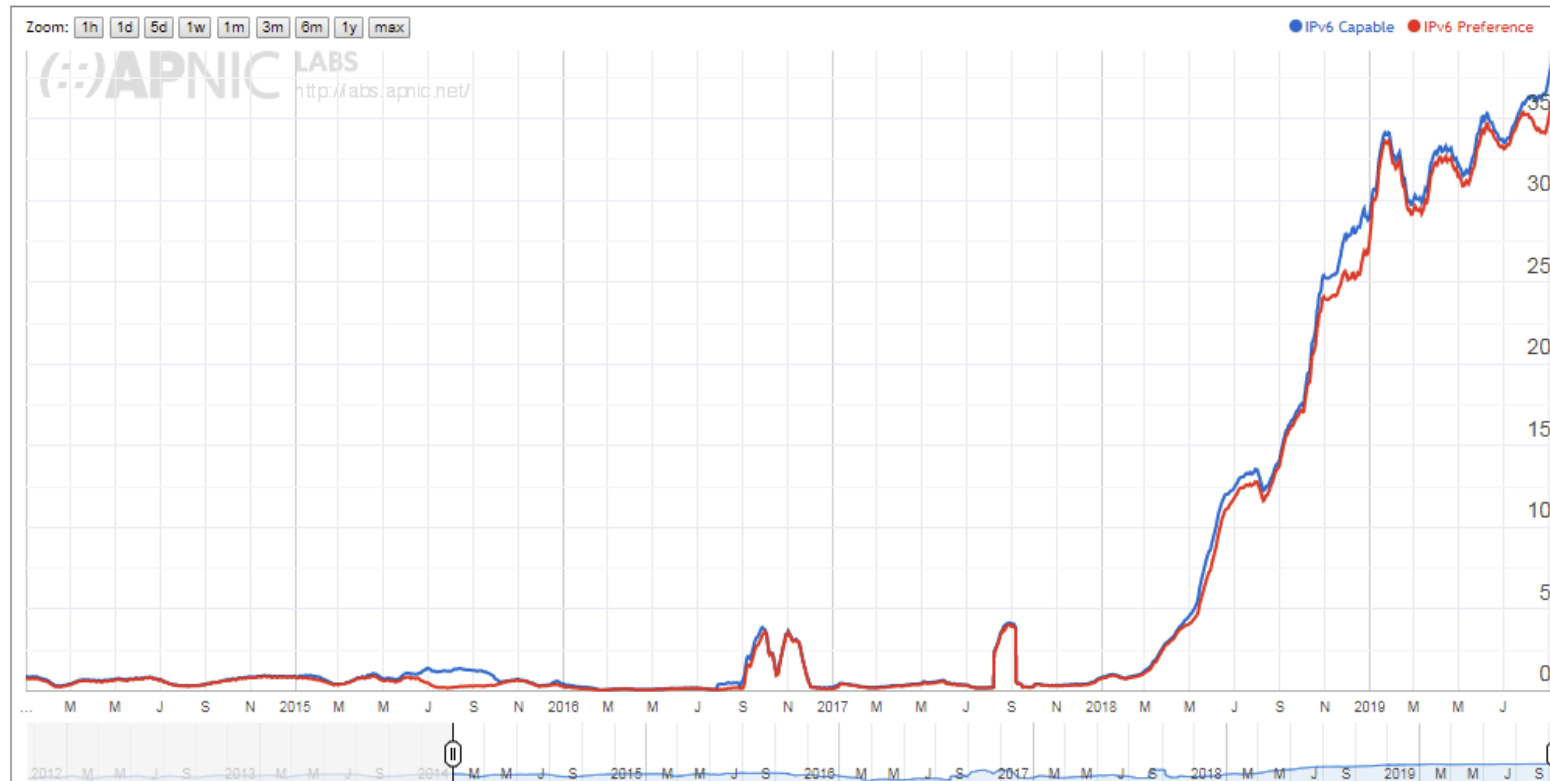
Use of IPv6 for Vietnam (VN)



政府とVNNICで2011年からIPv6対応計画を策定し推進
2019年が最終フェーズとなり対応が急増

アジア各国の状況 -台湾-

Use of IPv6 for Taiwan (TW)



2018年から2019年にかけて一気に急増 Alexaトップ100万の10%以上対応

2019年2月時点の3大ISPの対応状況

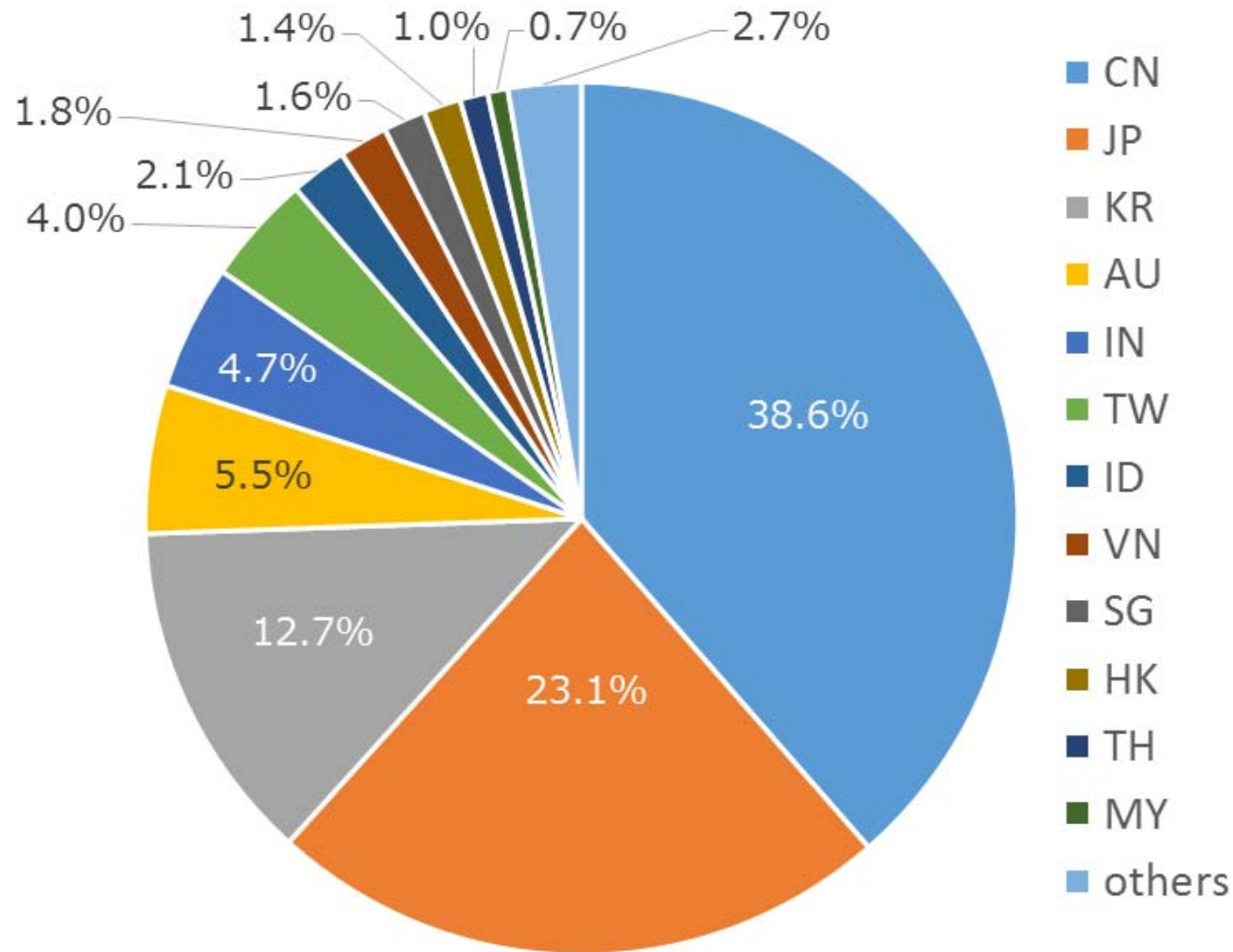
CHT Mobile:75% FETNet:51% Taiwan Mobile:30%

日本の状況

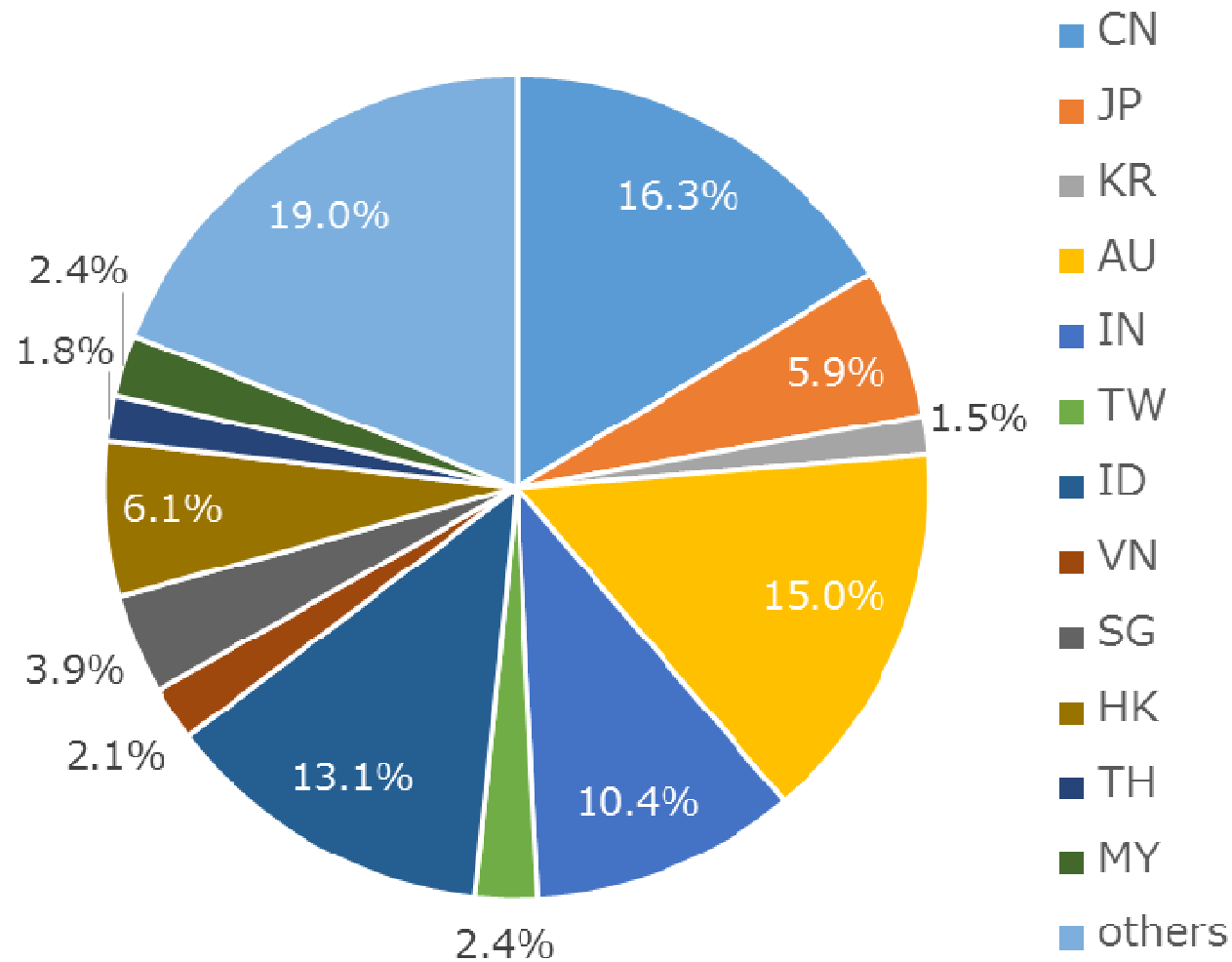
Use of IPv6 for Japan (JP)



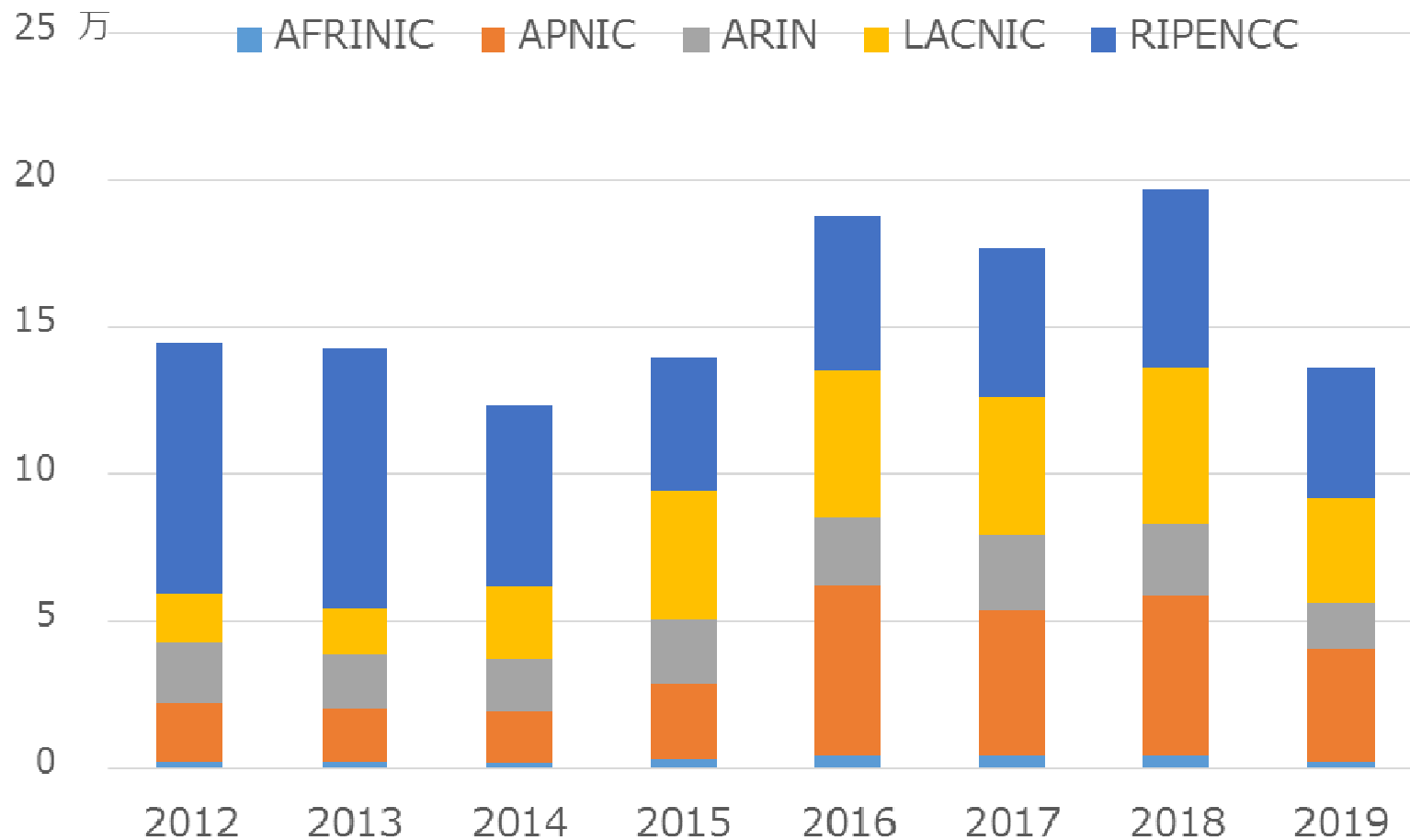
アジア地域のIPv4アドレス分布



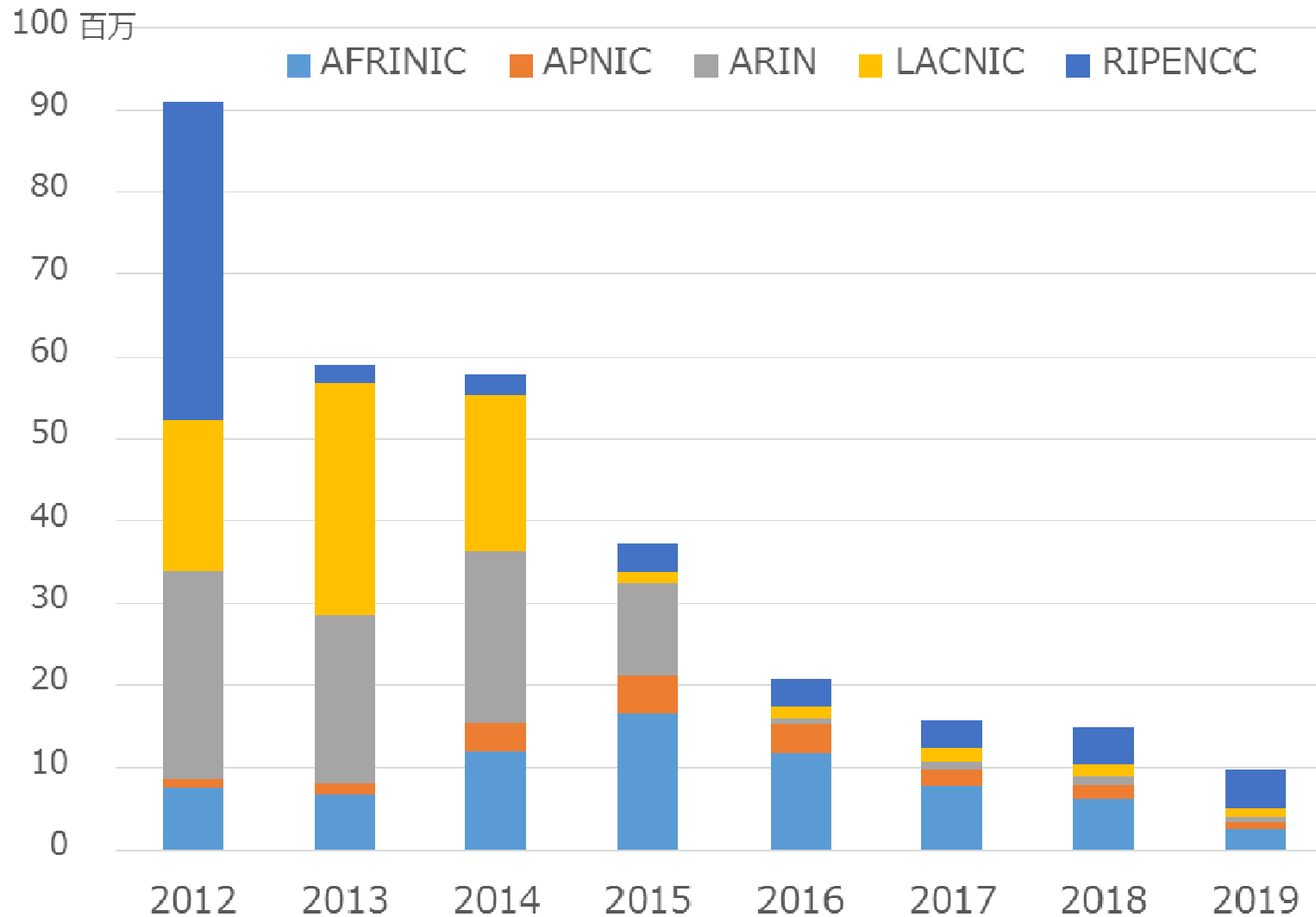
アジア地域のIPv6アドレス分布



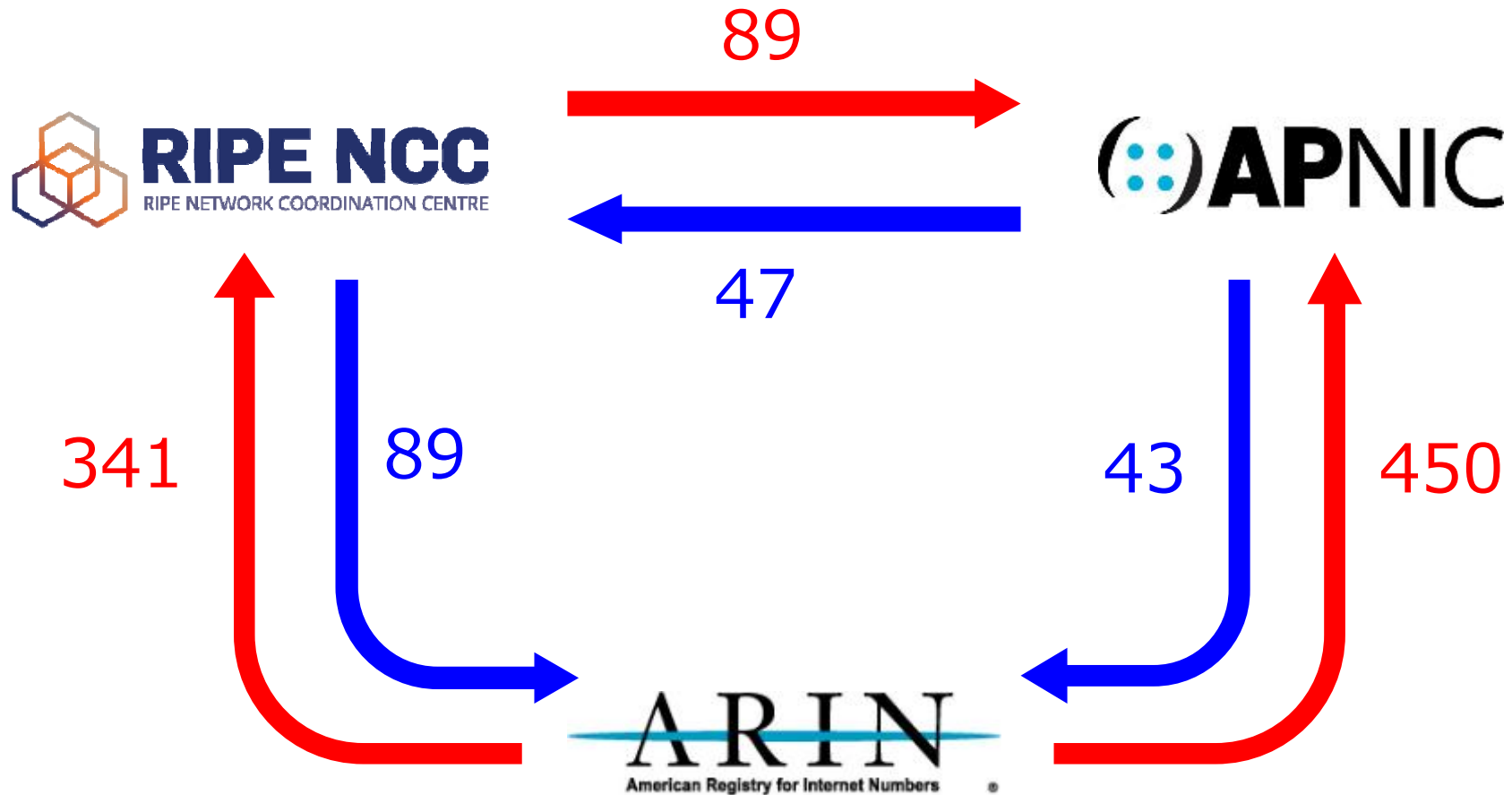
RIRのIPv6アドレスの分配推移



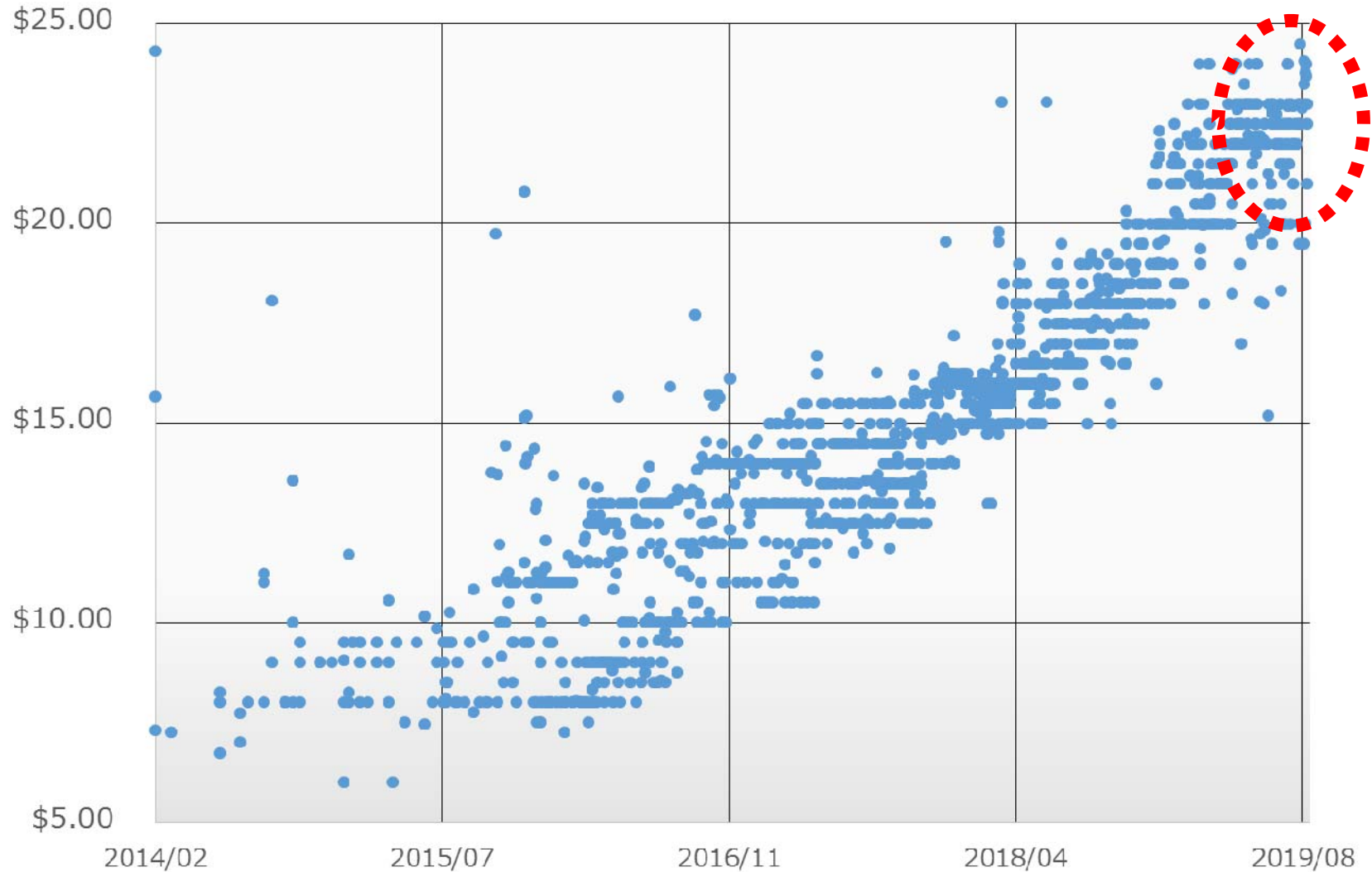
RIRのIPv4アドレスの分配推移



RIR間のIPv4アドレス移転状況

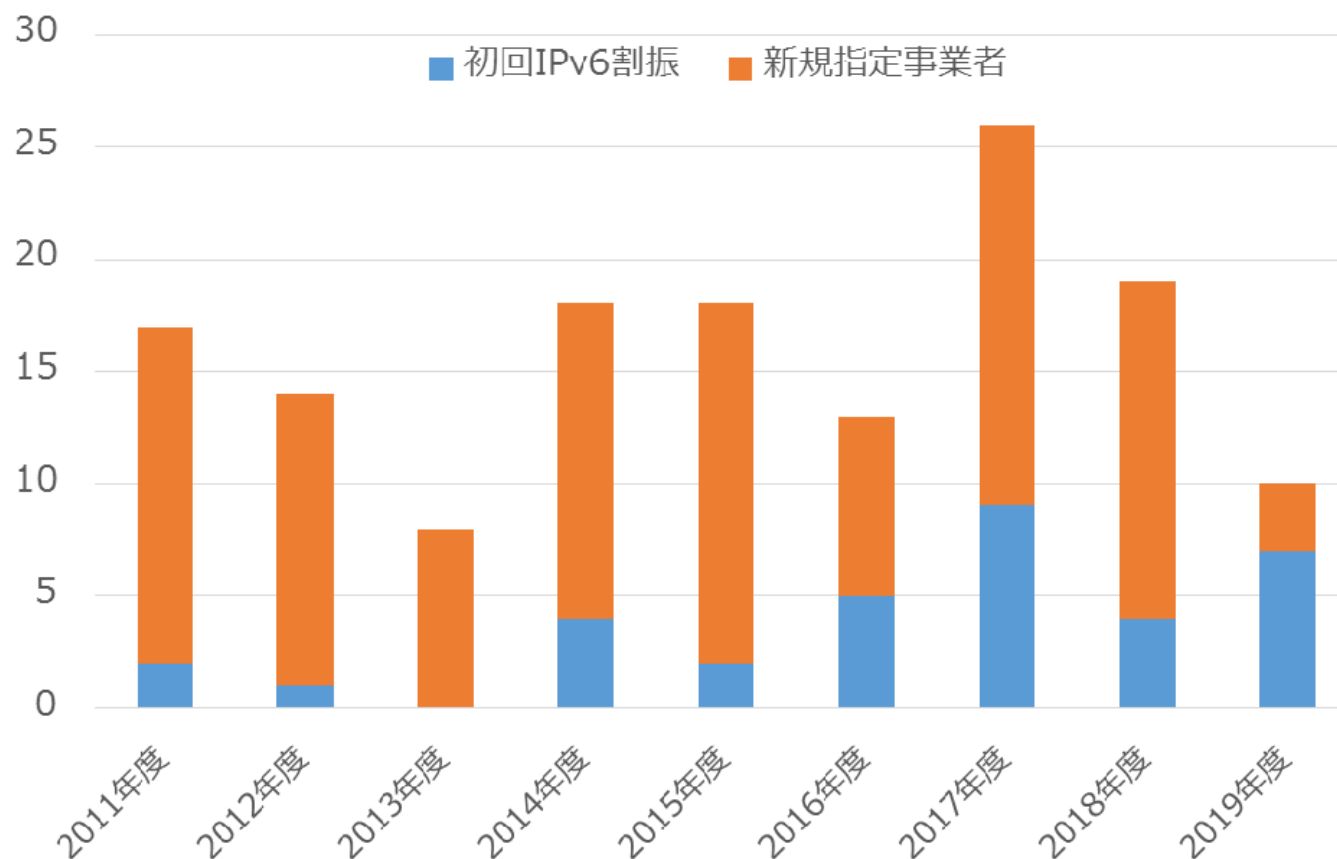


IPv4アドレスオークション落札価格



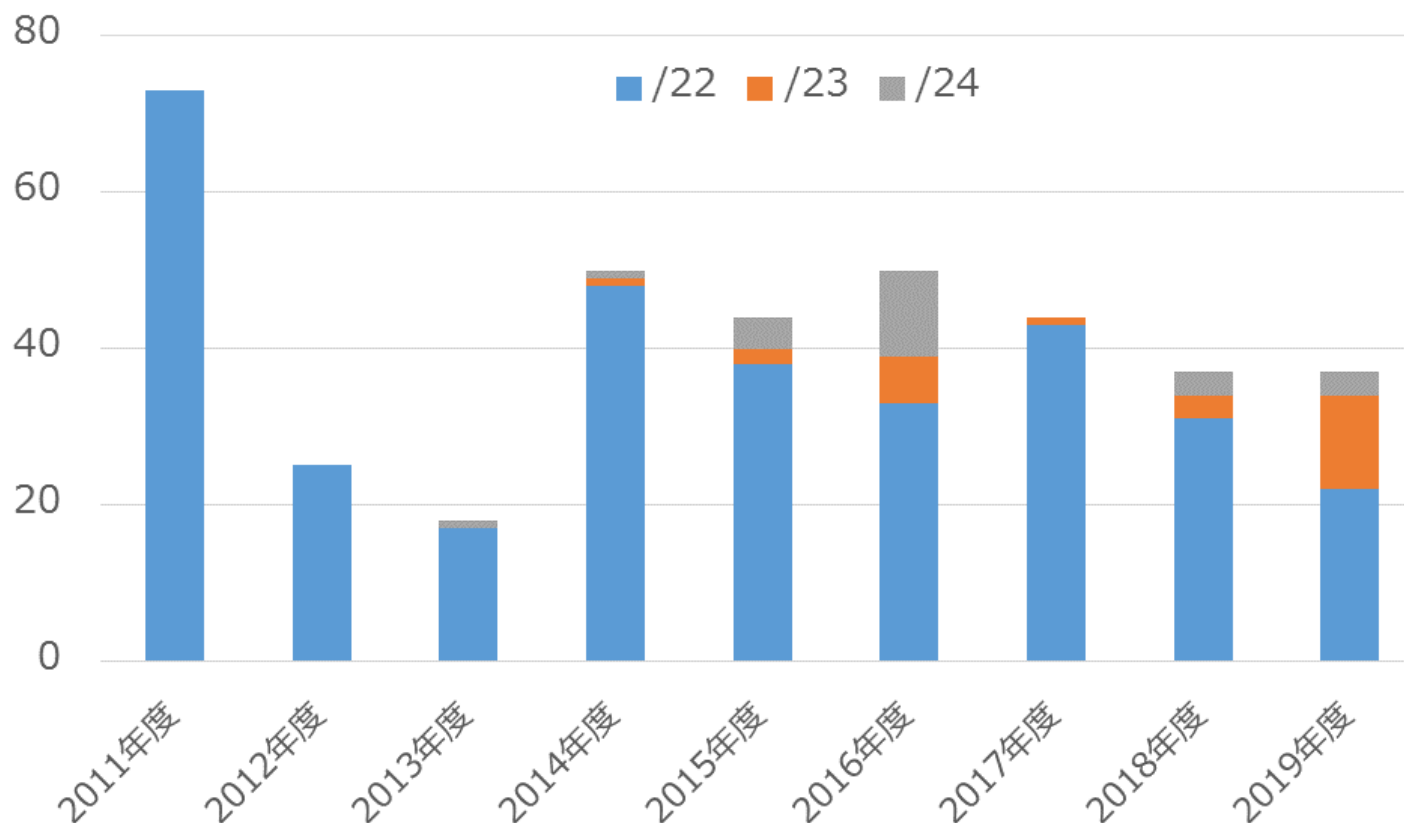
JPNICからのIPアドレス分配

- 新規IPアドレス管理指定事業者契約と同時にIPv6アドレスの割り振りを受ける件数



JPNICからのIPv4アドレス分配

- APNICのIPv4アドレス在庫枯渇以降のIPv4アドレス分配の推移



JPNICのIPv4アドレス移転

