



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE NCC Update

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GRNOG | 27 November 2015 | Athens - Greece

Overview



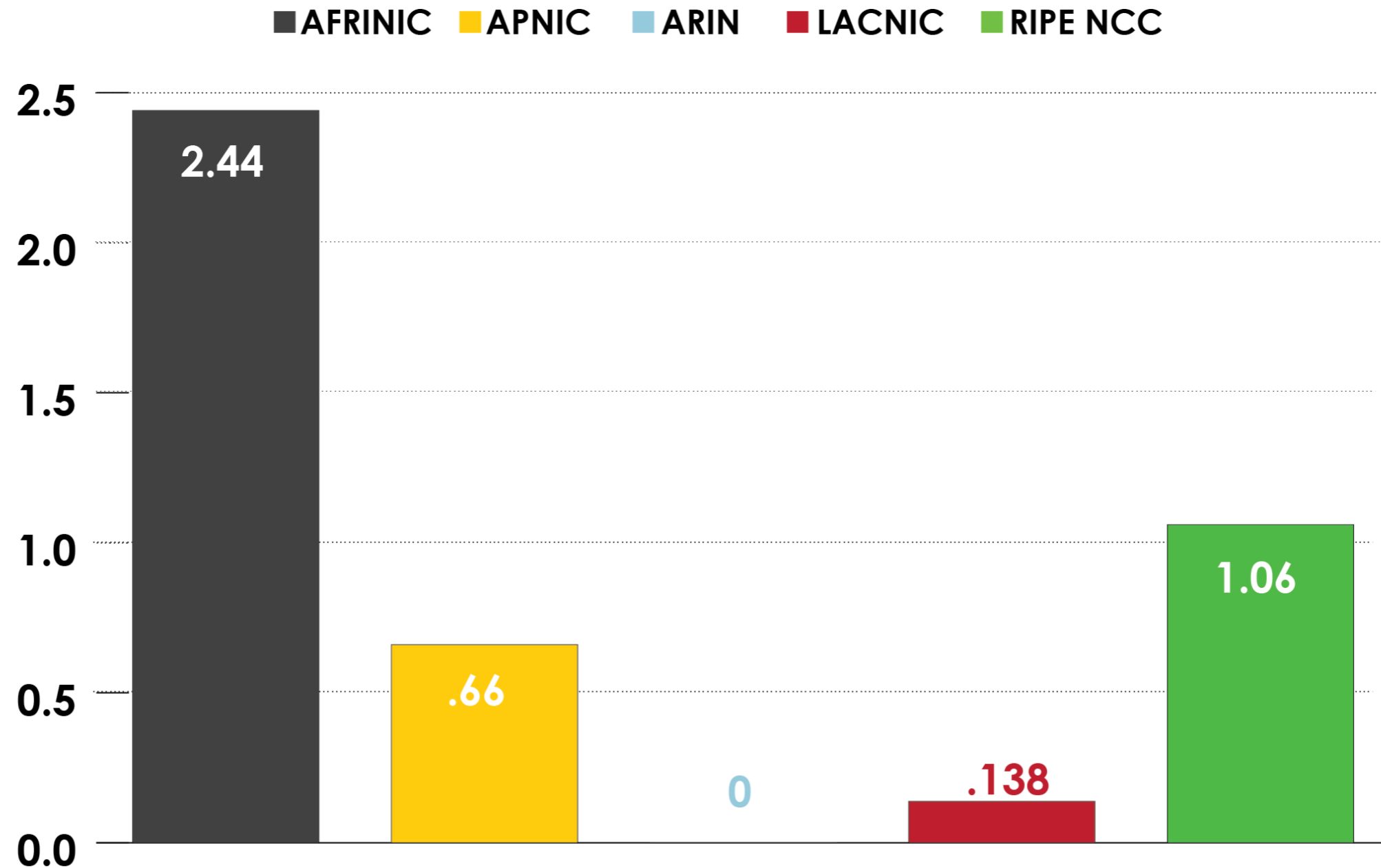
- A message from the RIPE NCC
- Internet number resource status report
- IPv6 deployment in Greece
- Policy proposals since the last GRNOG meeting
- RIPEstat



Internet Number Resources

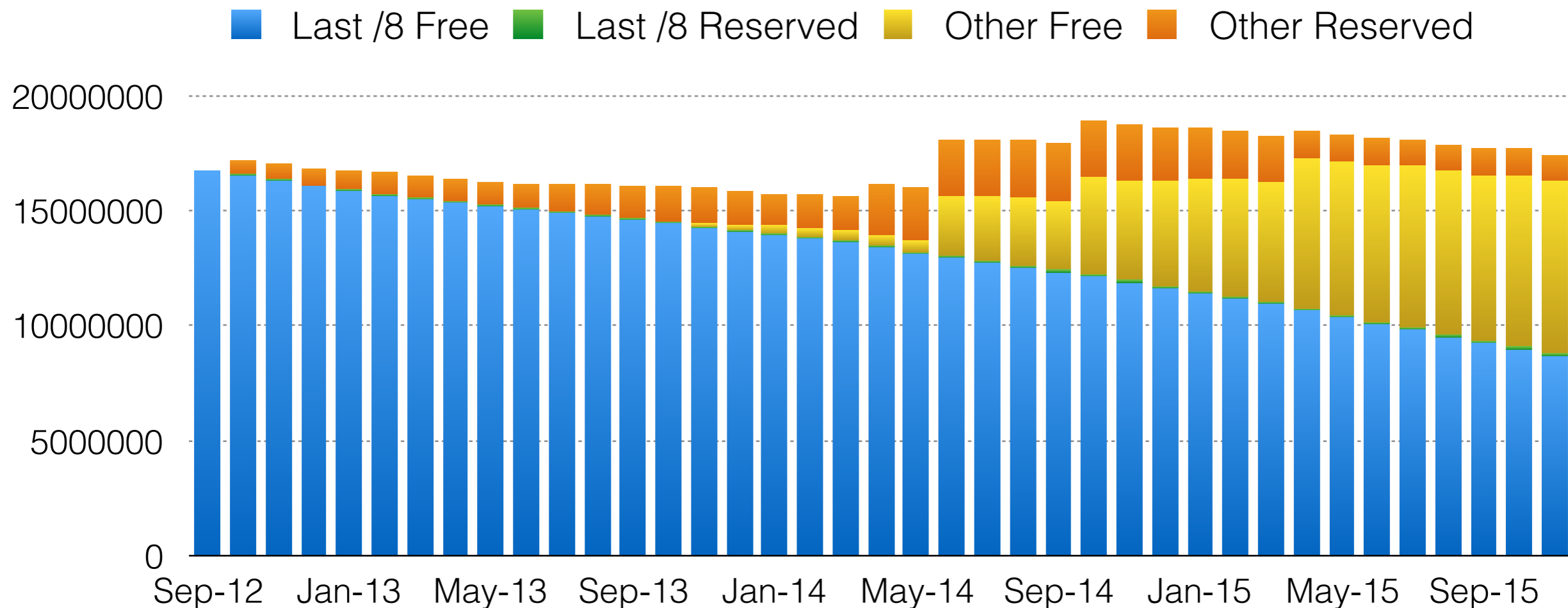
Status Report

Available IPv4 /8s In Each RIR



<https://www.nro.net/statistics>

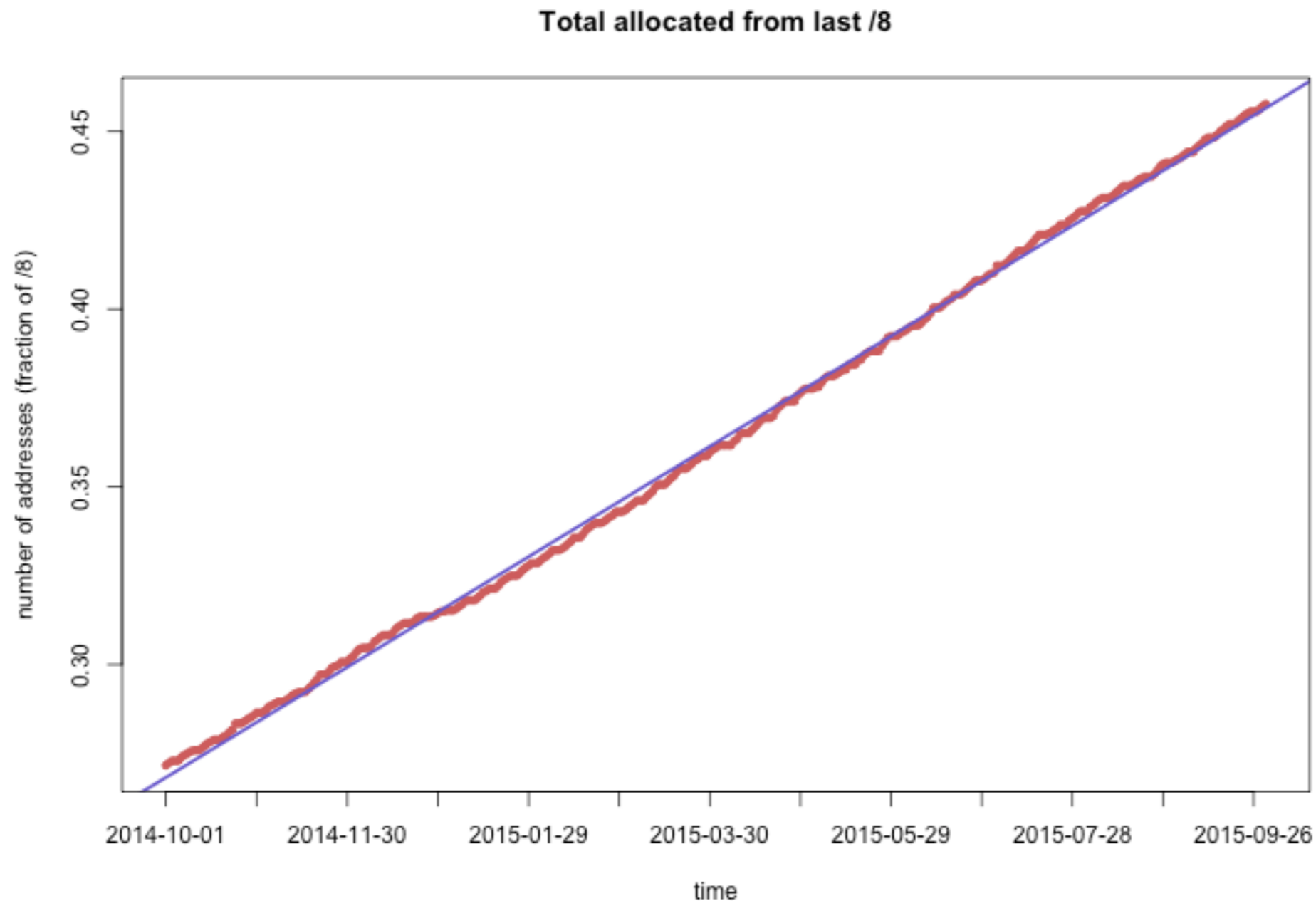
3 Years After Reaching the Last /8



- <http://bit.ly/IPv43y8>

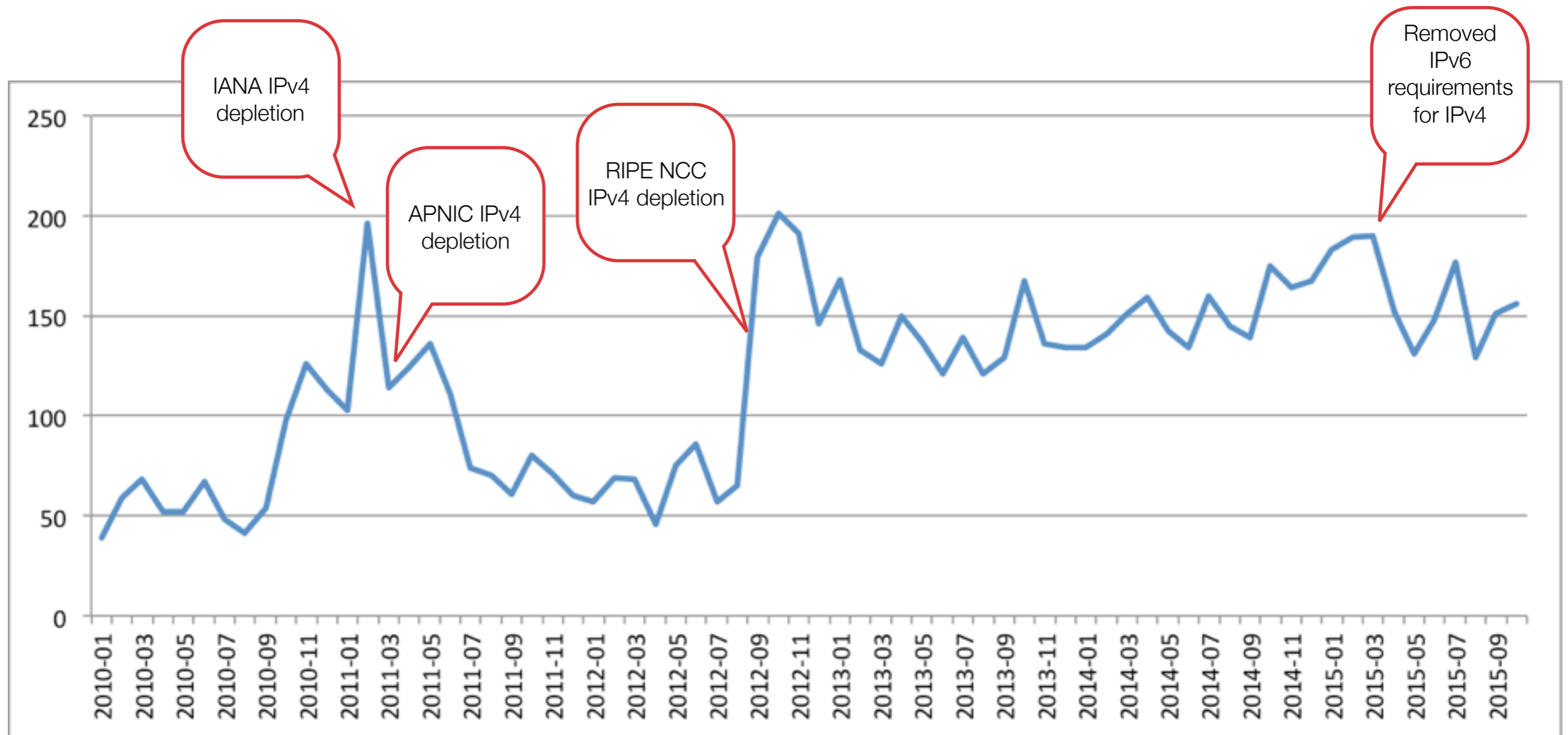
<https://labs.ripe.net>

Future of IPv4 Pool

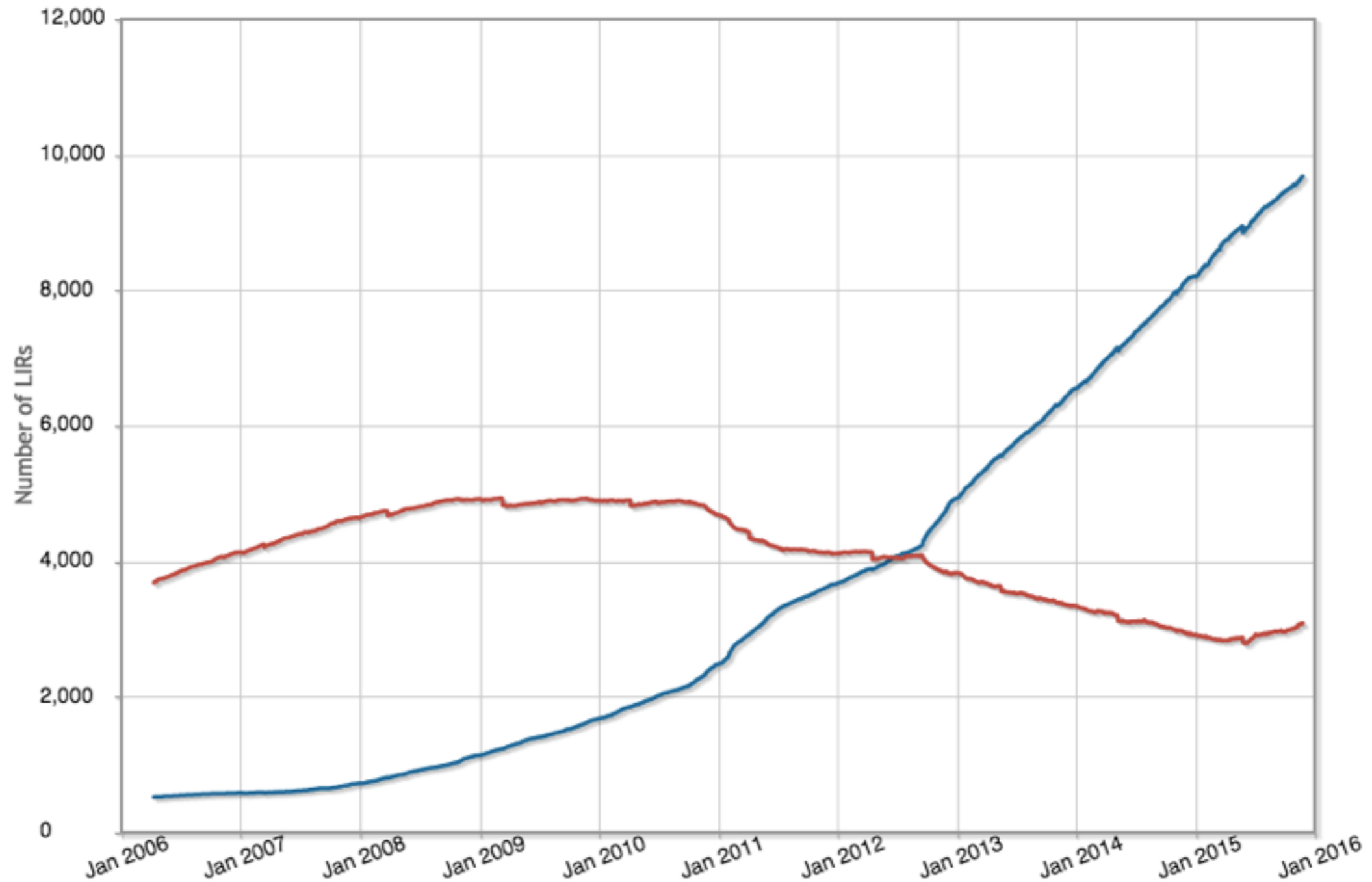


- Average of 8.5 /22s per day
- At this rate the IPv4 pool will last until January 2021

IPv6 Allocation Trend

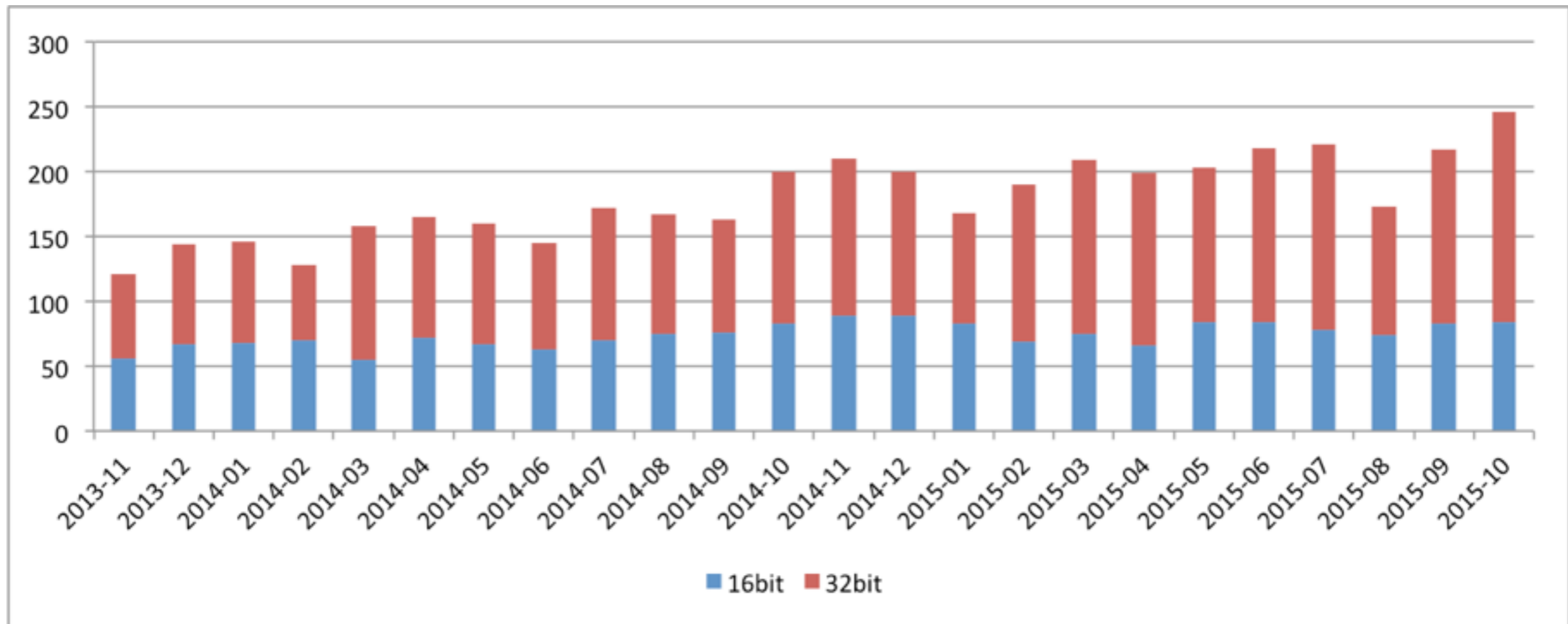


LIRs With and Without IPv6



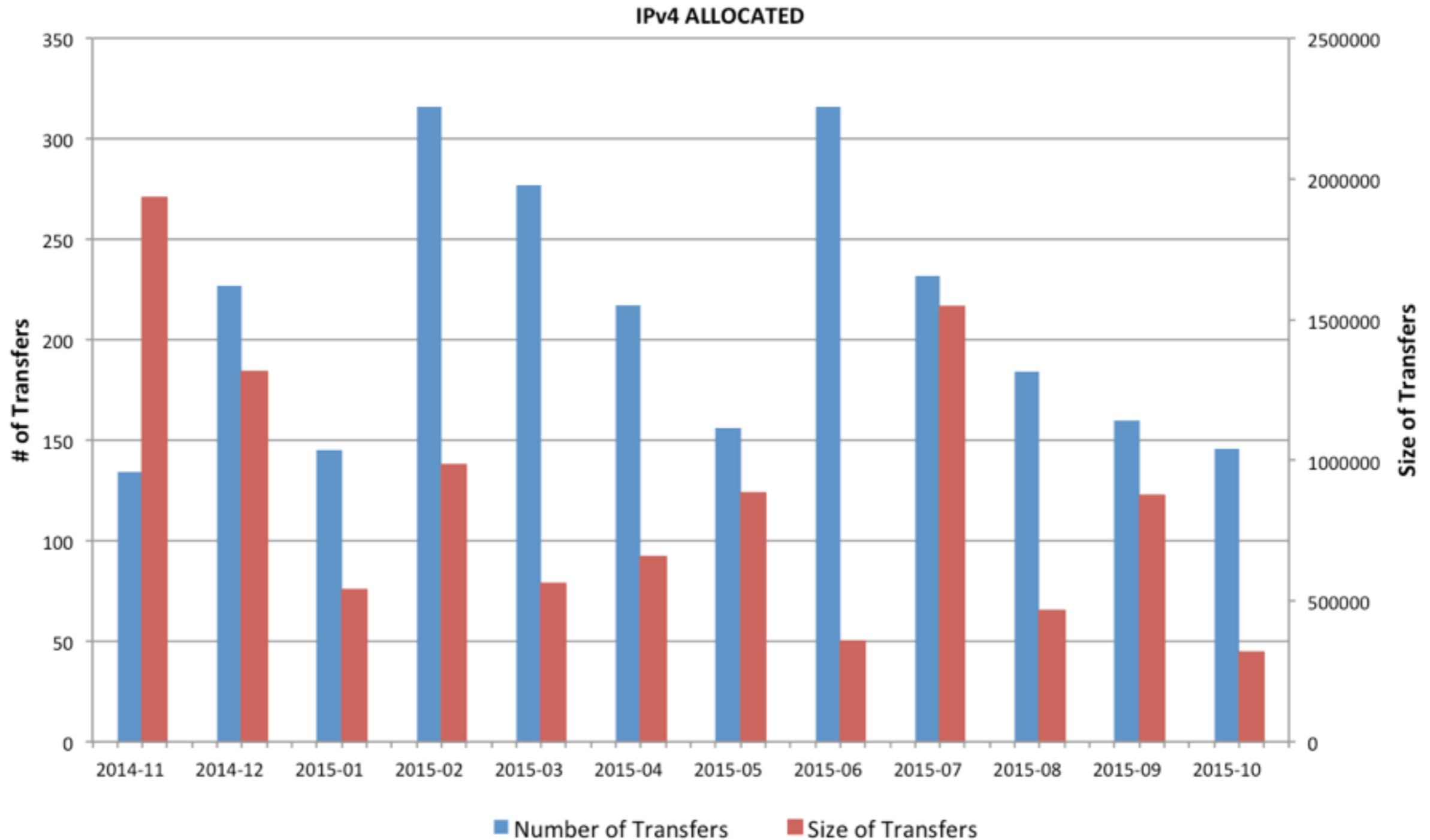
With: 9,683 - Without: 3,089

ASN Assignments

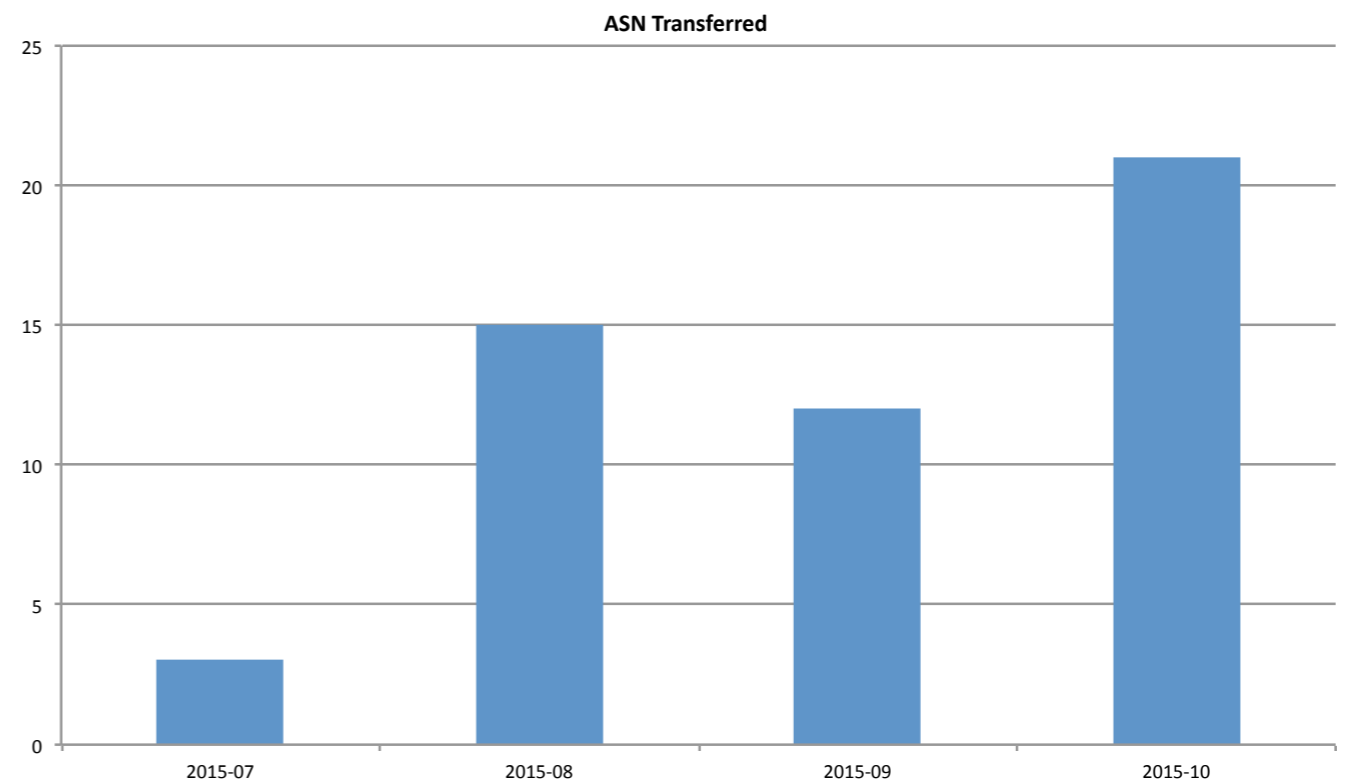
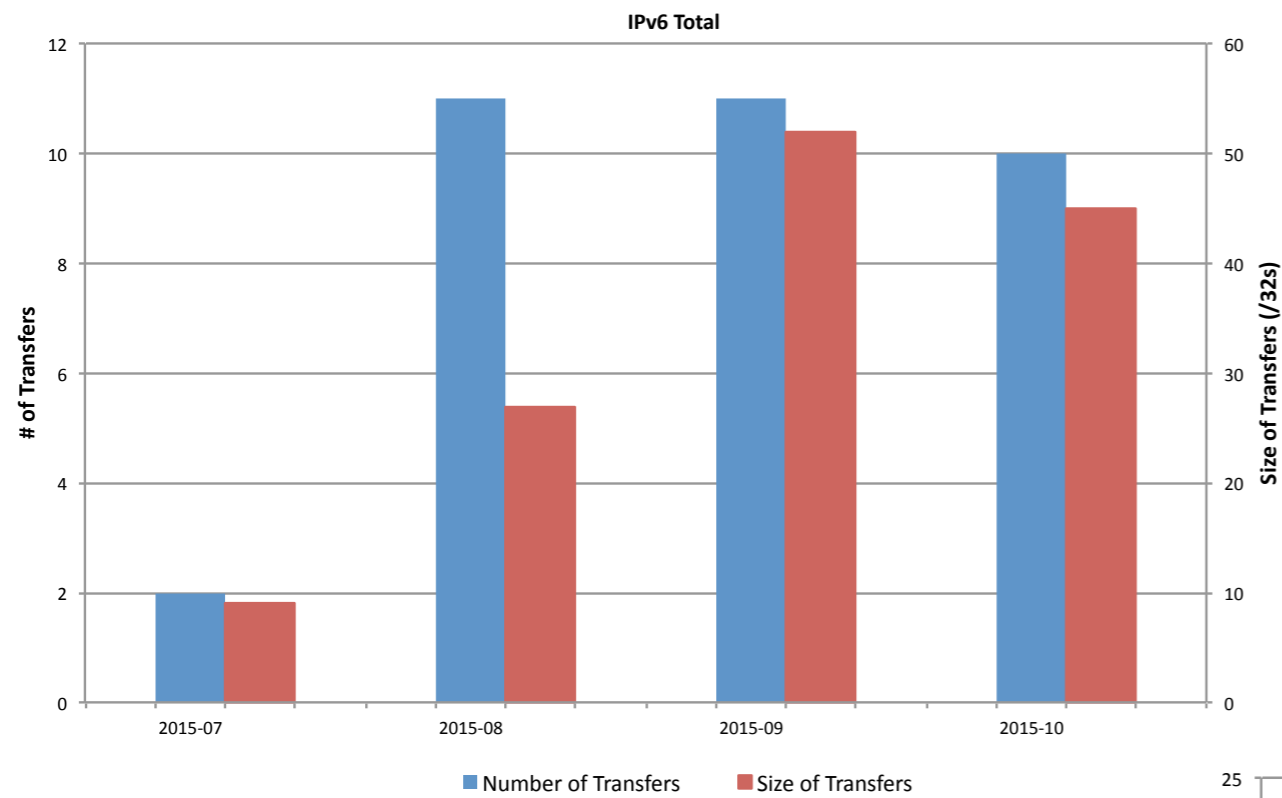


- ±2900 16bit ASNs.
- Will last ±36 months at current assignment rate

IPv4 Allocation Transfers



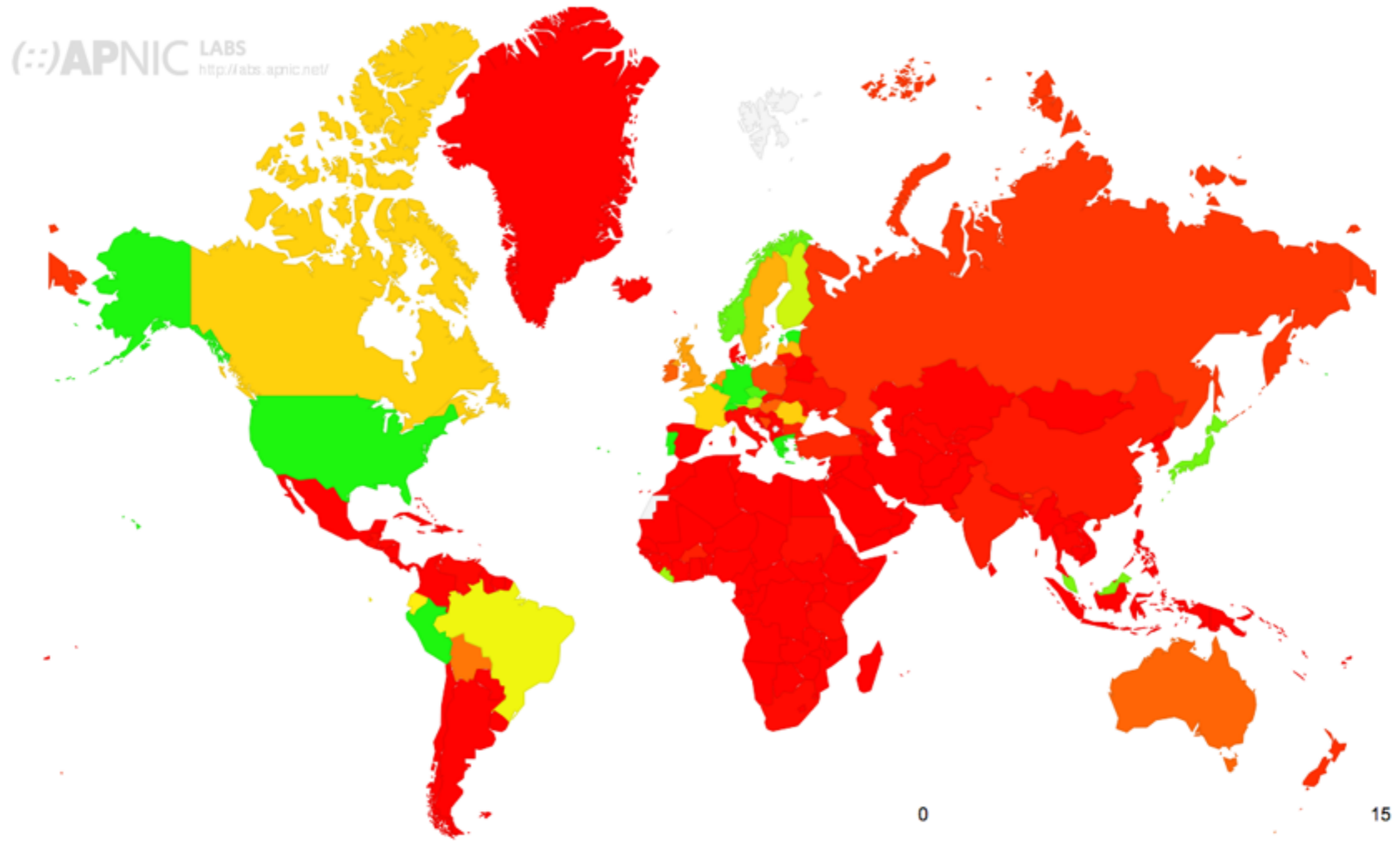
IPv6 and ASN Transfers





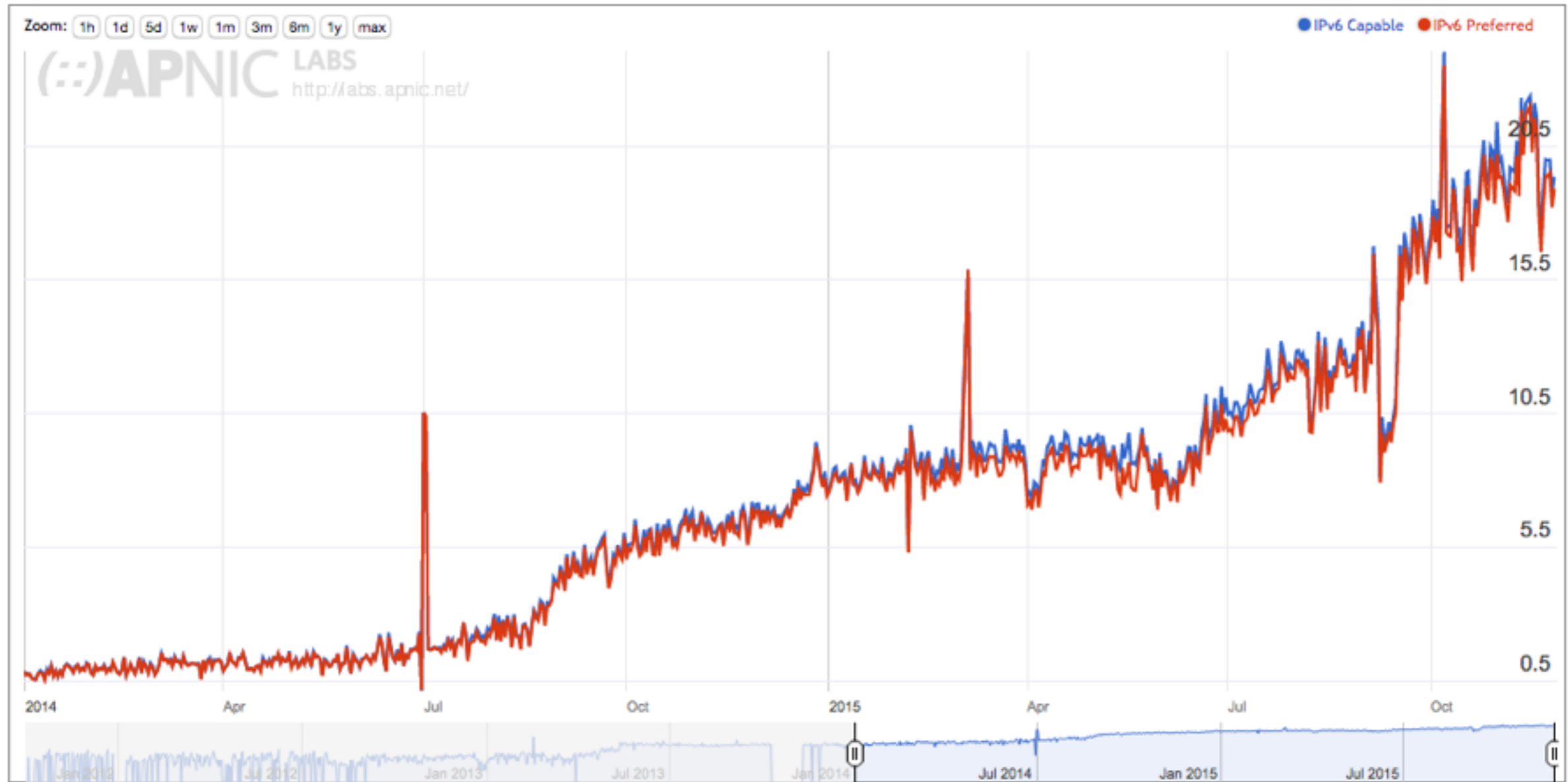
IPv6 Deployment in Greece

IPv6 Capable Rate by country



- <http://stats.labs.apnic.net/ipv6>

IPv6 Deployment in Greece



IPv6 Deployment in Greece



CC	Country	IPv6 Capable	IPv6 Preferred	Samples
BE	Belgium, Western Europe, Europe	47.46%	45.36%	2447190
US	United States of America, Northern America, Americas	27.90%	25.34%	32517946
CH	Switzerland, Western Europe, Europe	27.79%	26.24%	1308644
DE	Germany, Western Europe, Europe	27.52%	25.56%	2217171
PT	Portugal, Southern Europe, Europe	20.09%	19.16%	3857094
GR	Greece, Southern Europe, Europe	18.51%	18.02%	6947268
LU	Luxembourg, Western Europe, Europe	18.46%	16.42%	280187
EE	Estonia, Northern Europe, Europe	17.92%	17.52%	851902
PE	Peru, South America, Americas	16.78%	16.00%	6125868
JP	Japan, Eastern Asia, Asia	16.09%	14.99%	3161787

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS47616	CERTH Center for Research and Technology Hellas (CERTH)	83.23%	82.94%	674
AS3323	NTUA National Technical University of Athens	50.36%	48.35%	2329
AS1241	FORTHNET-GR Forthnet	41.54%	40.60%	1315267
AS5470	ASAUTHNET Aristotle University of Thessaloniki	31.35%	30.89%	3027
AS197121	DIODOS Greek Research and Technology Network S.A	29.54%	28.95%	31808
AS6799	OTENET-GR Ote SA (Hellenic Telecommunications Organisation)	26.48%	25.74%	2765175
AS8522	FORTH-AS Foundation of Research and Technology Hellas	9.30%	8.86%	2495
AS8248	GR-EDUNET Greek High-School Internet Network	6.81%	6.55%	5738
AS5408	GR-NET Greek Research and Technology Network S.A	6.41%	3.56%	26786
AS48489	EUROCORP-SA EUROCORP AEPEY	3.92%	3.92%	51

IPv6 Users by Country



IPv6 Users by Country

Date: 27 Nov 2015

Index	ISO-3166 Code	Internet Users	V6 Use ratio	V6 Users (Est)	Population	Country
1	BE	9312179	50.2793%	4682097	11328685	Belgium
2	DE	69551360	29.5597%	20559185	80686033	Germany
3	US	280447628	28.9834%	81283210	322724544	United States of America
4	CH	7223350	27.5708%	1991535	8331431	Switzerland
5	PT	6415803	22.0612%	1415404	10331407	Portugal
6	GR	6553276	20.3652%	1334587	10940361	Greece
7	LU	535422	19.1993%	102797	570813	Luxembourg
8	AP	0	18.6687%	0	0	Asia Pacific code
9	EE	1048925	18.6135%	195241	1311157	Estonia
10	PE	13151291	18.0373%	2372141	31537870	Peru
11	JP	114583818	14.2449%	16322319	126472206	Japan
12	CZ	7813964	12.1354%	948258	10545161	Czech Republic
13	MY	20588546	10.9660%	2257736	30501550	Malaysia
14	NO	4973913	10.2209%	508379	5235698	Norway
15	EU	0	9.8937%	0	0	European Union
16	SG	4625911	8.7904%	406638	5641355	Singapore
17	LR	209243	8.0678%	16881	4548764	Liberia
18	EC	12571400	7.6608%	963070	16242119	Ecuador
19	BR	113031450	7.6130%	8605078	208545112	Brazil
20	FI	5043249	7.5206%	379280	5511748	Finland

- <http://labs.apnic.net/dists/v6dcc.html>



Policy Proposals

Since last GRNOG meeting

Since last GRNOG meeting



- **Accepted & Implemented**

- 2015-01, “Alignment of Transfer Requirements for IPv4 Allocations”
- 2015-02, “Keep IPv6 PI When Requesting IPv6 Allocation”
- 2015-03, “Assessment Criteria for IPv6 Initial Allocation Size”

- **Also implemented**

- 2014-12: “Allow IPv6 Transfers”
- 2014-13: “Allow AS Number Transfers”
- 2014-05: “Policy for Inter-RIR Transfers”

Policy for Inter-RIR Transfers



Organisations in the RIPE NCC service region can transfer Internet number resources with organisations in other RIR service regions

Policy for Inter-RIR Transfers



- Transfers are possible between RIRs with compatible policies
- Currently only with ARIN and APNIC
 - IPv4 can be transferred to/from ARIN
 - IPv4 and ASNs can be transferred to/from APNIC
- Resources are always subject to the policies of the RIR they are registered with



RIP Estat

RIPEstat



- Presents:
 - registration data, abuse contacts
 - routing data
 - DNS data
 - geographical information and more...
- From RIPE NCC's internal data sets and external sources, such as other RIRs and IANA
- Widgets can be embedded on any webpage
- Visit: <https://stat.ripe.net>

RIPEstat



At a Glance (4)

- Routing (11)
- DNS (1)
- Anti Abuse (1)
- Database (5)
- Geographic (2)
- Activity (2)
- Suggestions (1)

+ MyView ?

AS Overview (AS3333)

✓ Originating Prefix(es)

Holder of this ASN:
RIPE-NCC-AS Reseaux IP Europeens Network Coordination Centre (RIPE NCC),NL

RIR	Status	Registration	Country
RIPE NCC	ALLOCATED	1994-05-19	EU

Show IANA Registry Information

Showing results for AS3333 as of 2015-11-27 08:00:00 UTC

source data embed code permalink info



Registry Browser (AS3333)

Last updated on 2015-09-04 at 11:16:41 UTC.

aut-num: AS3333

```
as-name RIPE-NCC-AS
descr Reseaux IP Europeens Network Coordination Centre (RIPE NCC)
org ORG-RIEN1-RIPE
admin-c JDR-RIPE
admin-c BRD-RIPE
tech-c OPS4-RIPE
mnt-by RIPE-NCC-END-MNT
mnt-by RIPE-NCC-MNT
```

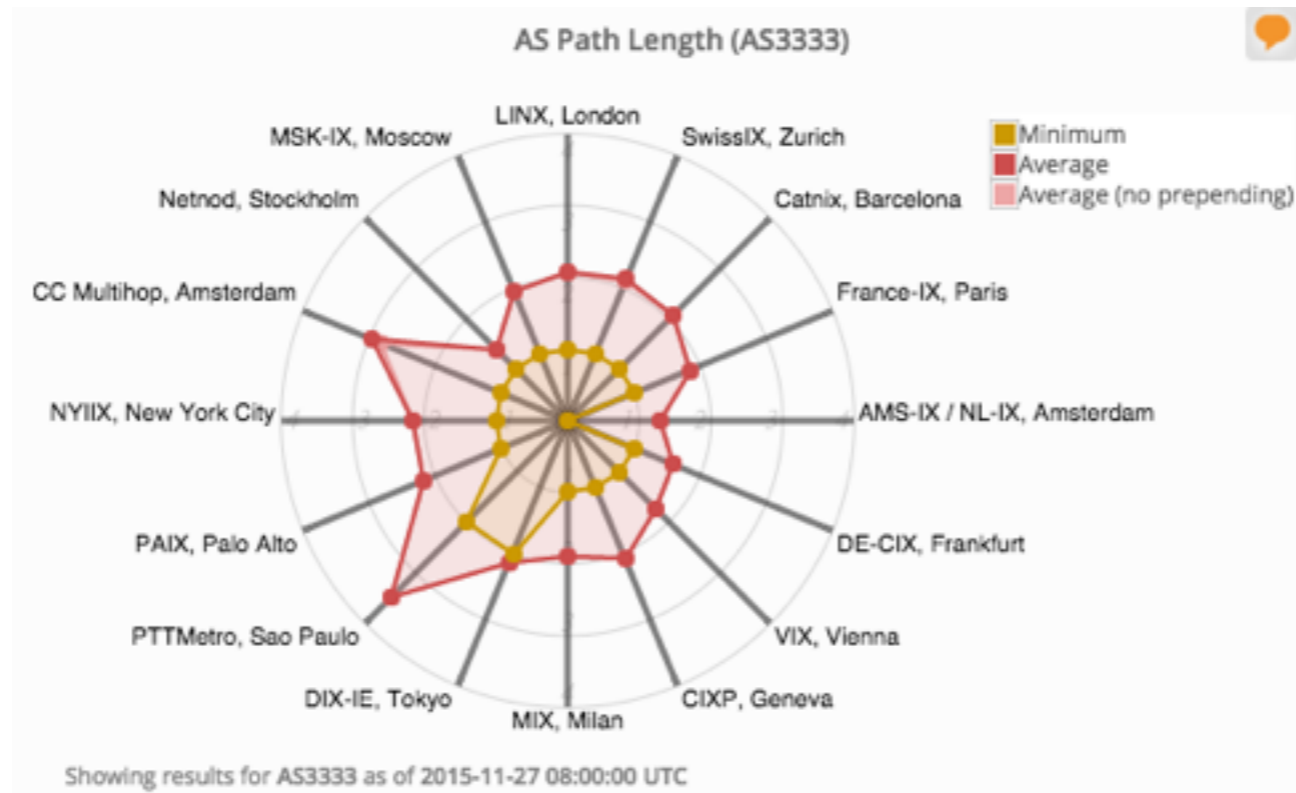
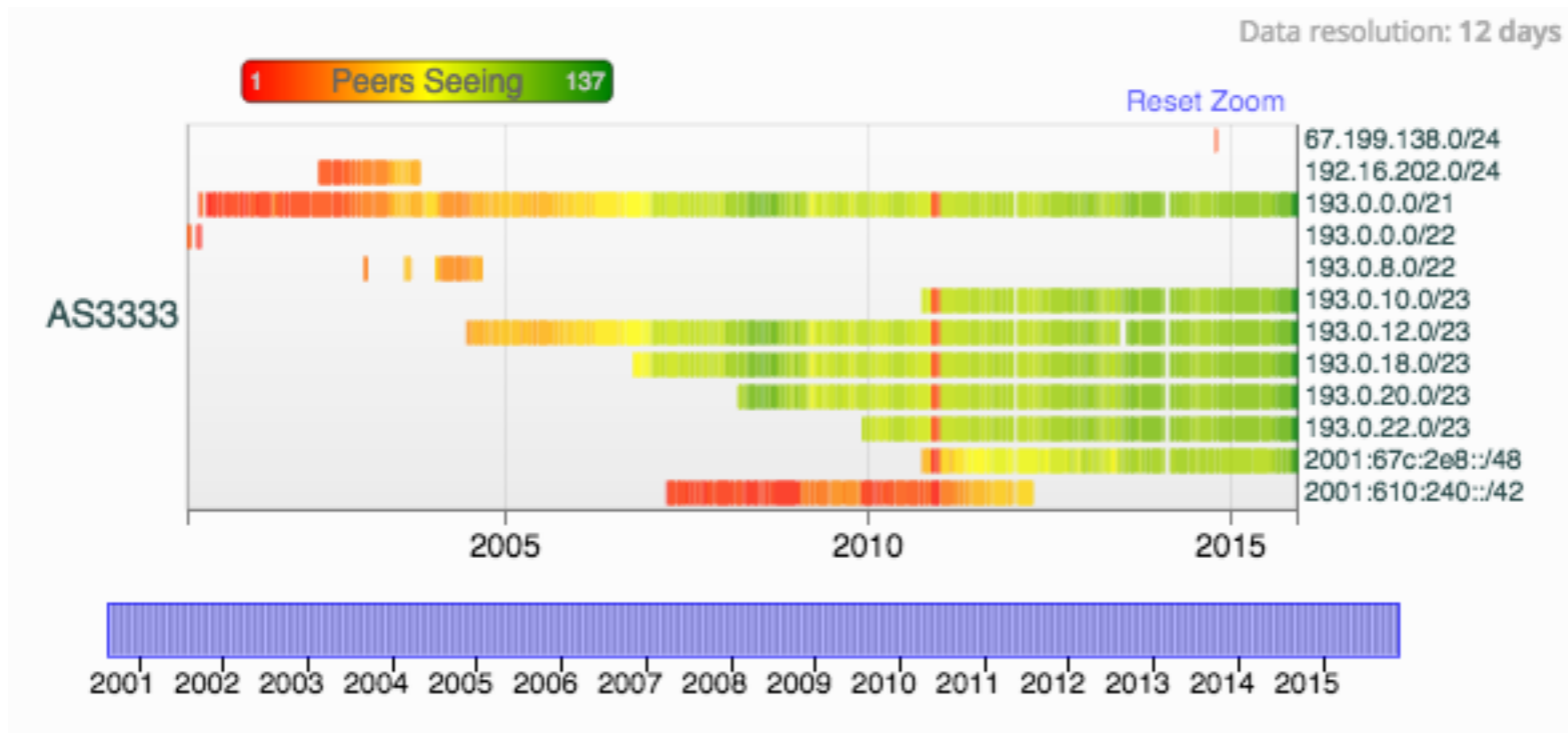
Routing Status (AS3333)

✓ At 2015-11-27 08:00:00 UTC, AS3333 was visible to 100% of 139 IPv4 and 100% of 130 IPv6 RIS full peers.

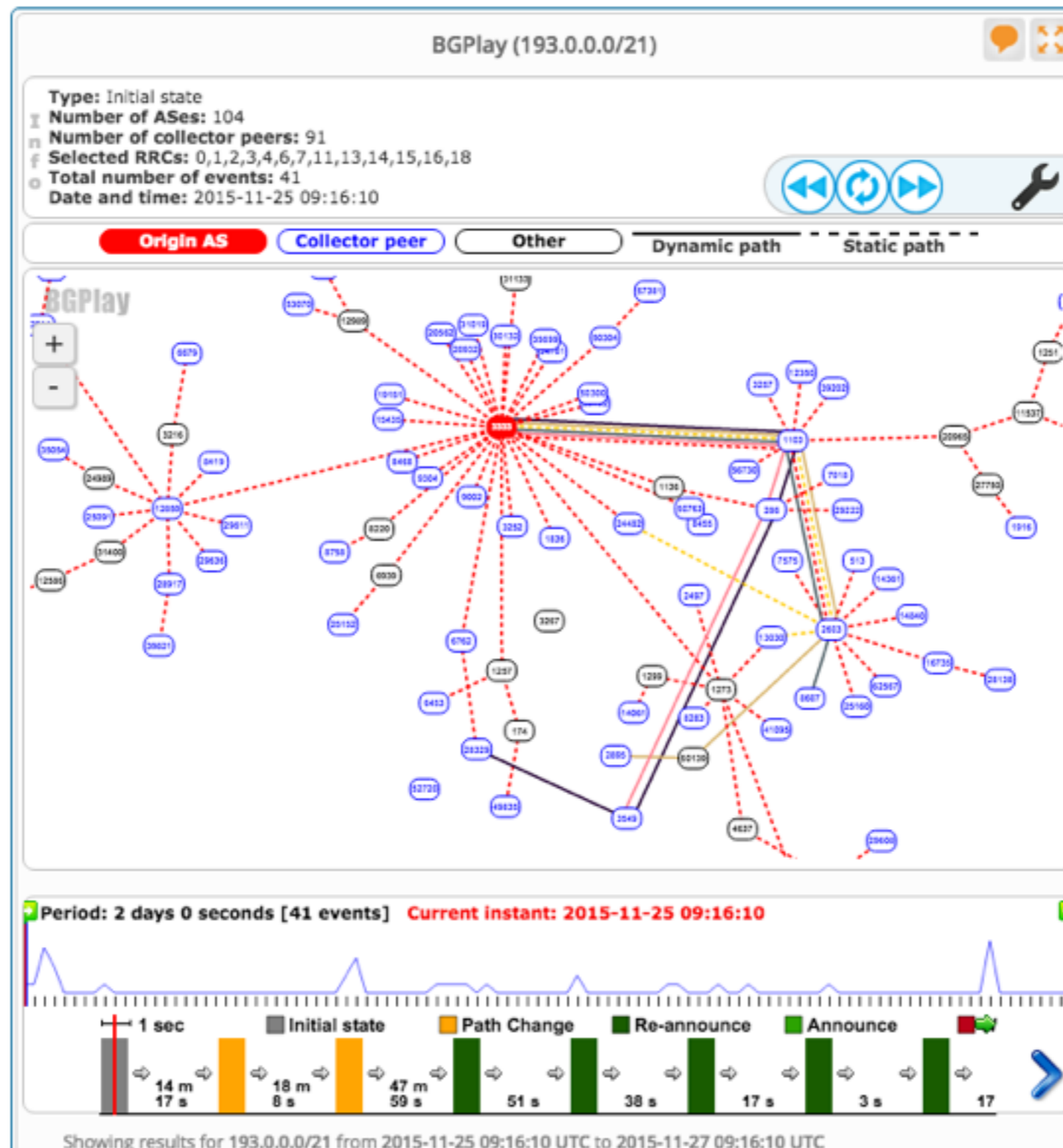
🕒 First ever seen as origin announcing 193.0.0.0/22, on 2000-08-18 08:00:00 UTC.

Originated IPv4 prefixes: 6
Originated IPv6 prefixes: 1
Observed BGP neighbours: 58
Address space announced (IPv4): 4608 IPs
Address space announced (IPv6): equiv. to 1 /48s

RIPEstat



RIPEstat





Questions



 [@RIPENCC_IPRAs](https://twitter.com/RIPENCC_IPRAs)