3:10ff 1918:109 198.



### **RIPE NCC Update**

#### Latest news about IPv4 & IPv6

Nathalie Kunneke-Trenaman

RIPE NCC | RONOG2 | 29 October 2015

- Secretariat for the RIPE community
- Maintains the RIPE Database
- One of the five Regional Internet Registries (RIRs)
  - Serving: Europe, the Middle East and parts of Central Asia
  - 76 countries
- Allocate and assign IPv4 and IPv6 addresses and also assign AS Numbers
- Outreach, tools, measurements, training and more!



- Independent, not-for-profit, bottom-up membership organisation
- Anyone can become a member
- Incorporated in the Netherlands, governed by Dutch law
- Funded by members, fully autonomous
- Open, transparent, neutral and impartial
- Offices in Amsterdam, Dubai and Moscow
  - Around 130 staff members

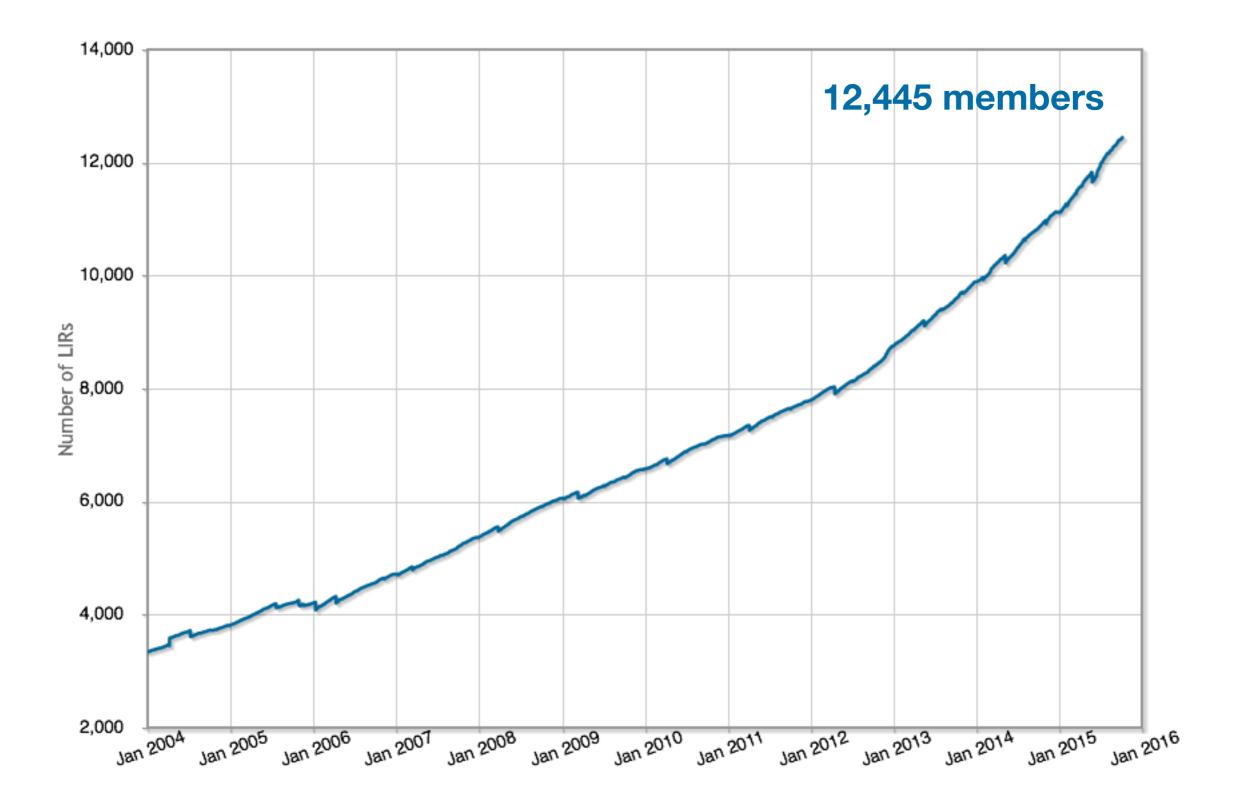


# A Lot Going On...

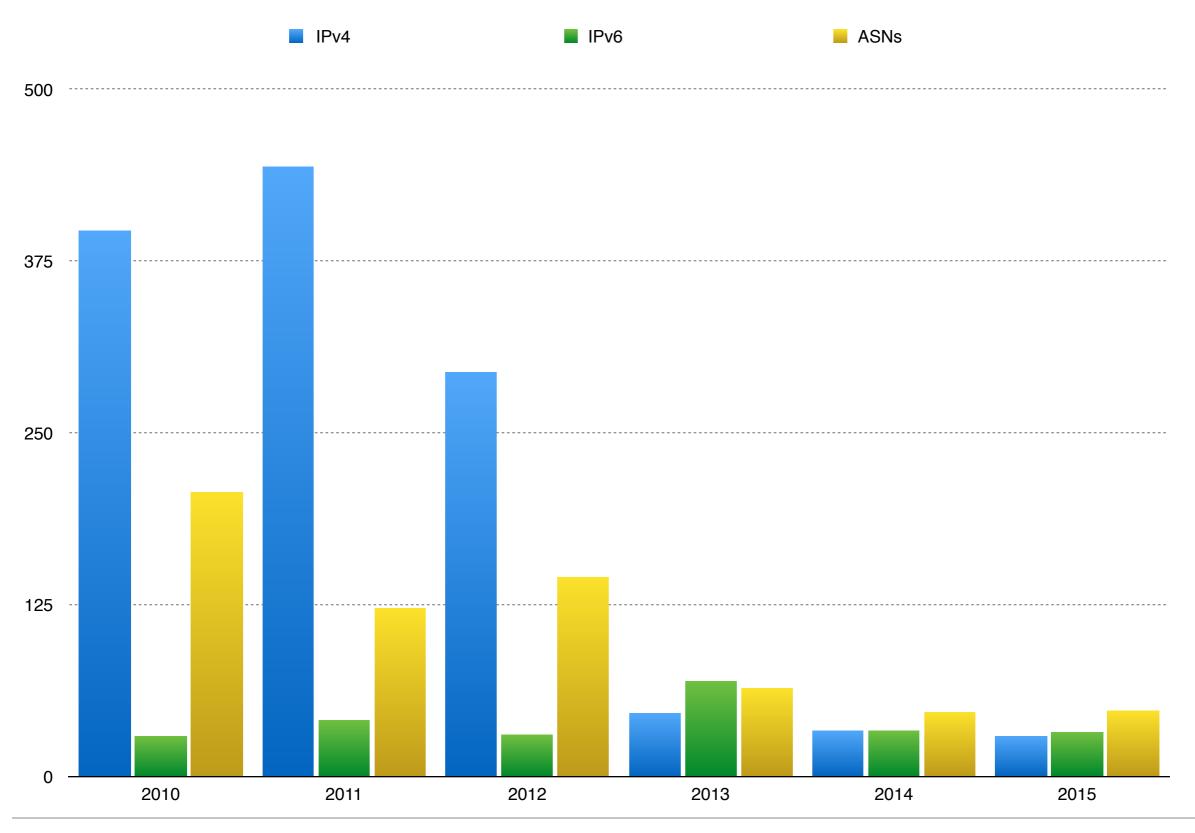
- Membership continuing to grow
- Our focus for 2015
- Expanding regional presence
- IPv6 gaining momentum
- IPv4 transfers increasing
- Member feedback
- November General Meeting (GM)
- And much more to come...



### **Membership Growth**



#### **Internet Number Resources Issued to Romania**



Nathalie Kunneke-Trenaman - RONOG2 - October 2015

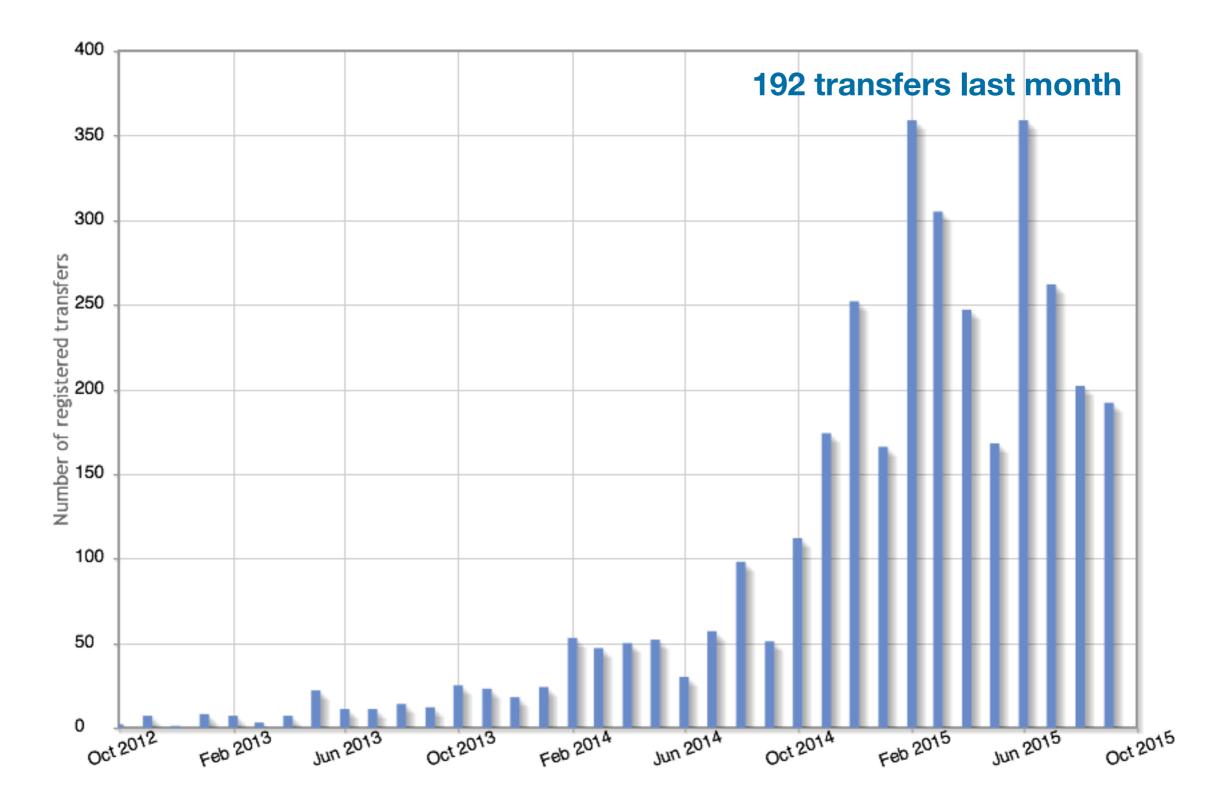


- We still have IPv4 addresses left more than a /8 in the available pool
  - Every member can get 1,024 addresses (/22)
  - Block reserved for Internet Exchange Points
- Number of transfers increasing:
  - 919 IPv4 transfers in 2014 / 2,288 so far in 2015
- "Alignment of Transfer Requirements" policy change reduces IPv4 speculation from the last /8

https://labs.ripe.net/Members/wilhelm/ipv4-in-the-ripe-ncc-service-regionthree-years-after-reaching-the-last-8

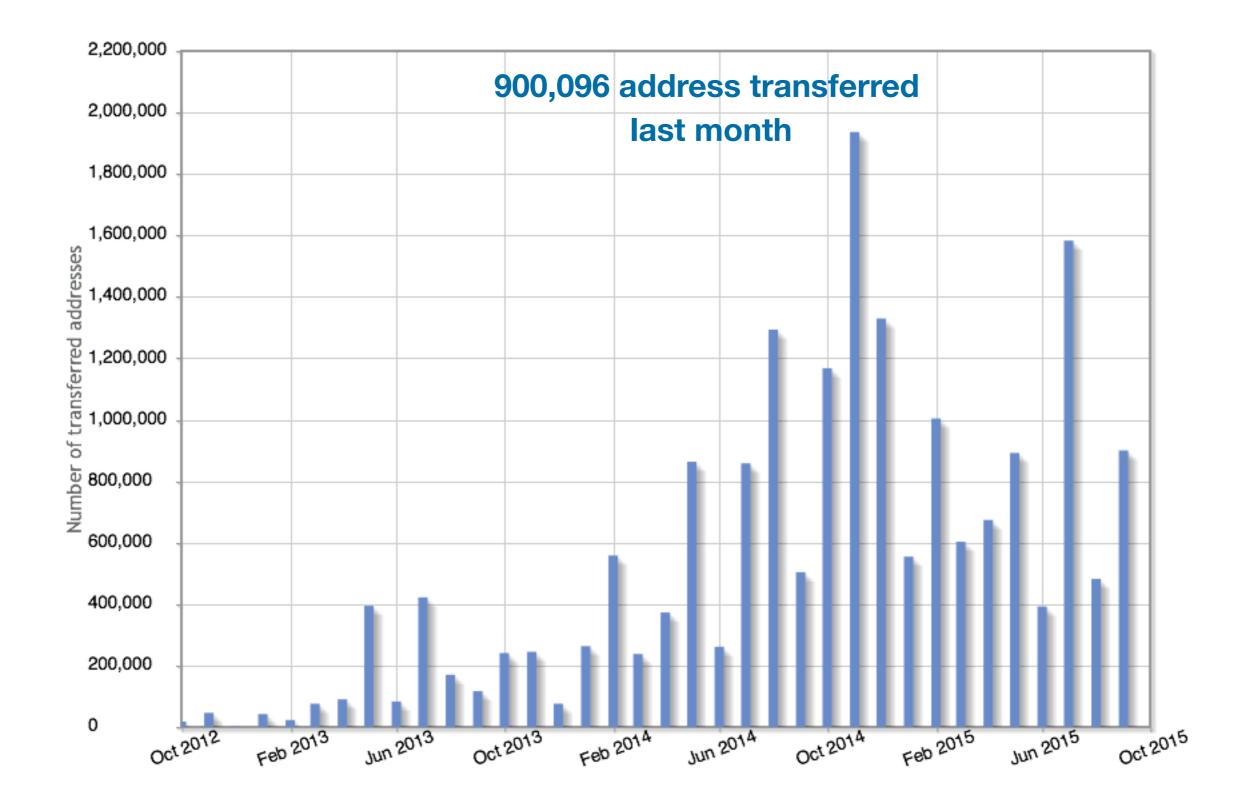


### **IPv4 Transfers on the Rise**





### **Number of Addresses Transferred**



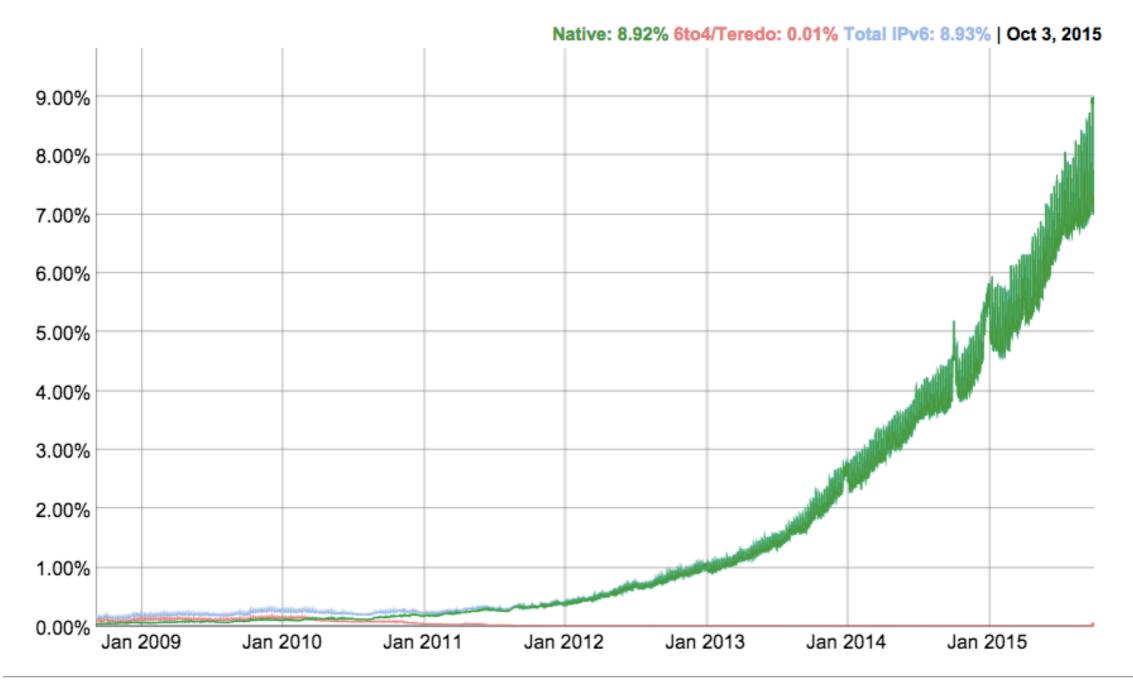


## **Protecting Against Hijacks**

- IPv4 addresses becoming more valuable
- Hijackers try very sophisticated methods to obtain control over (apparently) unused address blocks
  - Faking registration and identity papers
  - Faking entire websites and domains
- RIPE NCC has to do more thorough checks
  - 233 resources investigated in 2014
  - Finding the right balance between due diligence and being overly bureaucratic



#### • IPv6 is reaching end-users



Nathalie Kunneke-Trenaman - RONOG2 - October 2015



- "IPv4 depletion was the main reason for our IPv6 deployment" -Large provider, Belgium
- "IPv6 was a business continuity decision" -Large web shop
- "All apps submitted to the App Store must support IPv6 starting in early 2016" -Apple
- "IPv6 is important for us as we pursue our mission of helping the world connect and share online. " -Facebook



# Where do people implement IPv6?

Rank	IPv6 % 🔫	Country Search Q
1	34.9%	Belgium
2	19.8%	Switzerland
3	18.3%	United States of America
4	17.3%	Реги
5	16.9%	Germany
6	15.6%	Portugal
7	14.1%	Luxembourg
8	13.8%	Greece
9	10.0%	Estonia
10	8.6%	Czech Republic

Source: https://www.stateoftheinternet.com





13% End user growth in the last 12 months

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- Mostly OTEnet and Forthnet
  - 2 largest ISPs in Greece
  - National competitiveness



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#IPv6

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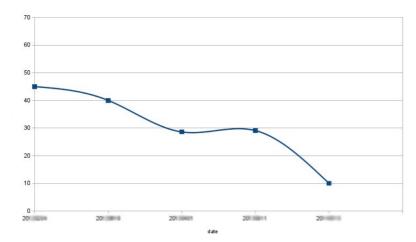
43

1:05 PM - 7 Jun 2011





#### • IPv4 shortage is a direct threat



• They dismantled their IPv6 Taskforce in April 2015

- But started GRNOG
- IPv6 Presentations by OTE and Forthnet
  - https://www.grnet.gr/en/node/506





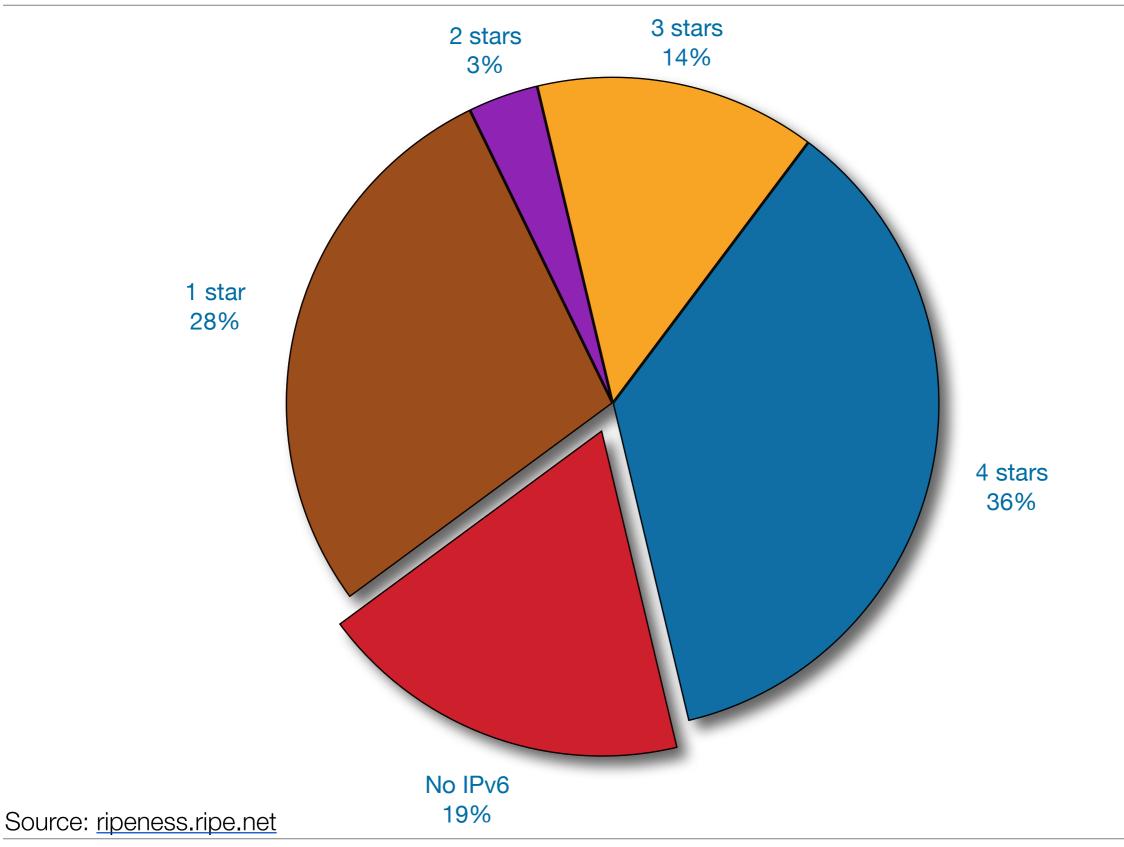
#### Actually only 3 parties have IPv6

Economy	ASN	AutNum	AS Name	# samples	v6 capable 🔻	v6 preferred
EE	3249	ESTPAK	AS Eesti Telekom	35614	14.00%	13.62%
EE	3221	EENET-AS	Hariduse Infotehnoloogia Sihtasutus	1428	6.86%	6.72%
EE	39823	COMPIC	Compic Ltd.	175	1.14%	1.14%

- Rapid growth, from 0 to 5% end users in 4 weeks
- Eesti Telecom prepared for a long time and then "switched it on"
- Combined replacement of BNG platform with IPv6 rollout.



### Romania: 86 LIRs





### Romania: 86 LIRs

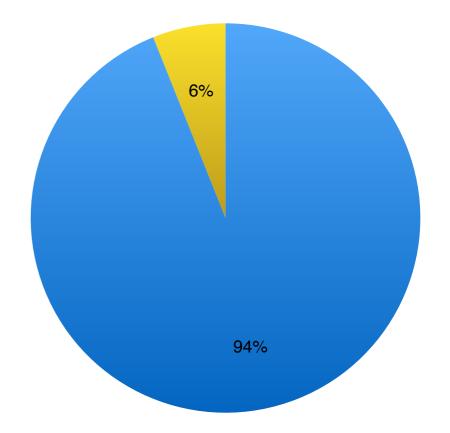
- From the 1st of January we will promote 5 star RIPEness
- LIRs that provide content and access over IPv6

Access	Access	Conten	tLIR						
(last 6 months)(last month)									
10.6 %			AdNet Telecom Services SRL						
9.5 %	8.3 %	46.7 %	Agentia de Administrare a Retelei Nationale de Informatica pentru Educatie si Cercetare						
12.0 %	10.0 %		Alsys Net SRL						
76.1 %	75.0 %		RCS & RDS SA						
		35.0 %	Serviciul de Telecomunicatii Speciale						
		40.3 %	Voxility S.R.L.						



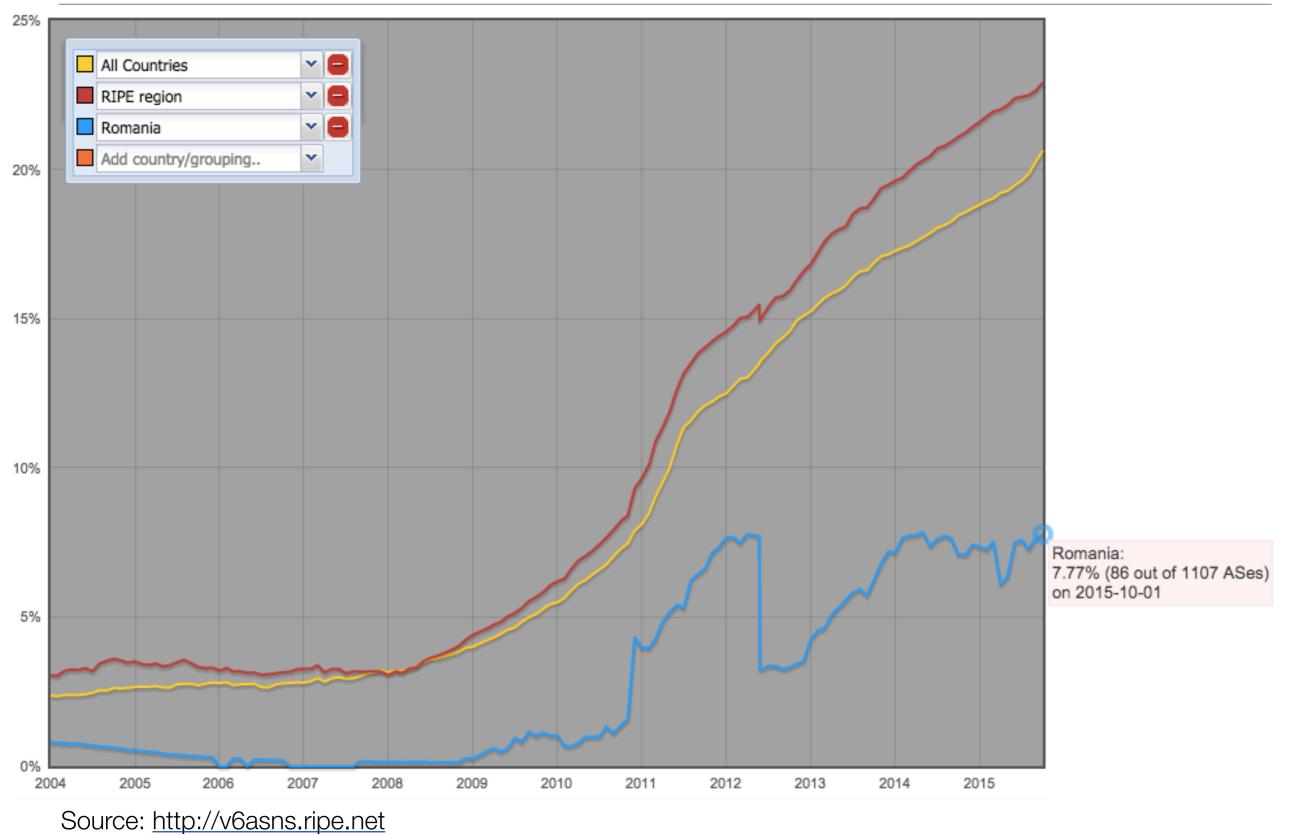
## Lost Stars

- 4 of the 62 Romanian LIRs stopped announcing their IPv6 allocation
- In some cases after 2.5 years
- We are trying to find out why
- And asking if we can help





### Romania: 1107 ASNs





## **RIPE NCC General Meeting**

- Next GM will be in Bucharest in November
- The GM is where members can discuss the operations and activities of the RIPE NCC
- You can participate fully (voting and discussion) remotely
- Your direction is essential please participate and vote in GMs!

<u>https://www.ripe.net/publications/news/announcements/general-meeting-</u> <u>november-2015-registration-open</u>

## At the General Meeting in November

- Members will discuss the draft Activity Plan and Budget
  - Outlines our plans for the coming year
  - Provides detailed costs in terms of OPEX and FTE
  - Final version is approved by the Executive Board and published in December
- Members will vote on what to do with our surplus
  - Keep it, where it will be taxed before being added to the RIPE NCC's reserves; or
  - Return it to members (around €350 each)



- A virtual learning environment launched in late 2014
- Allows members to access training resources in their own time, certify their skills, and connect with our trainers and each other through an interactive





### Questions



