

RIPE NCC Services & Activities

NaMeX Regional Meeting 2013, Paestum, Italy,
21 June 2013

Mirjam Kühne, RIPE NCC



Overview

- What is the RIPE NCC
 - Services for members and public services
- Tools and Measurements
 - IP Analyser
 - RIPE Labs
 - RIPEstat
 - RIPE Atlas

RIPE NCC

- Began operating in 1992
 - Formally established in 1997 as Membership Association under Dutch law
- One of the five Regional Internet Registries (RIRs)
- Supports the coordination of Internet operations
- Not-for-profit membership organisation
- Over 9,200 members (Local Internet Registries)
- Neutral, Impartial, Open, Transparent

The Five Regional Internet Registries



RIPE NCC Activities

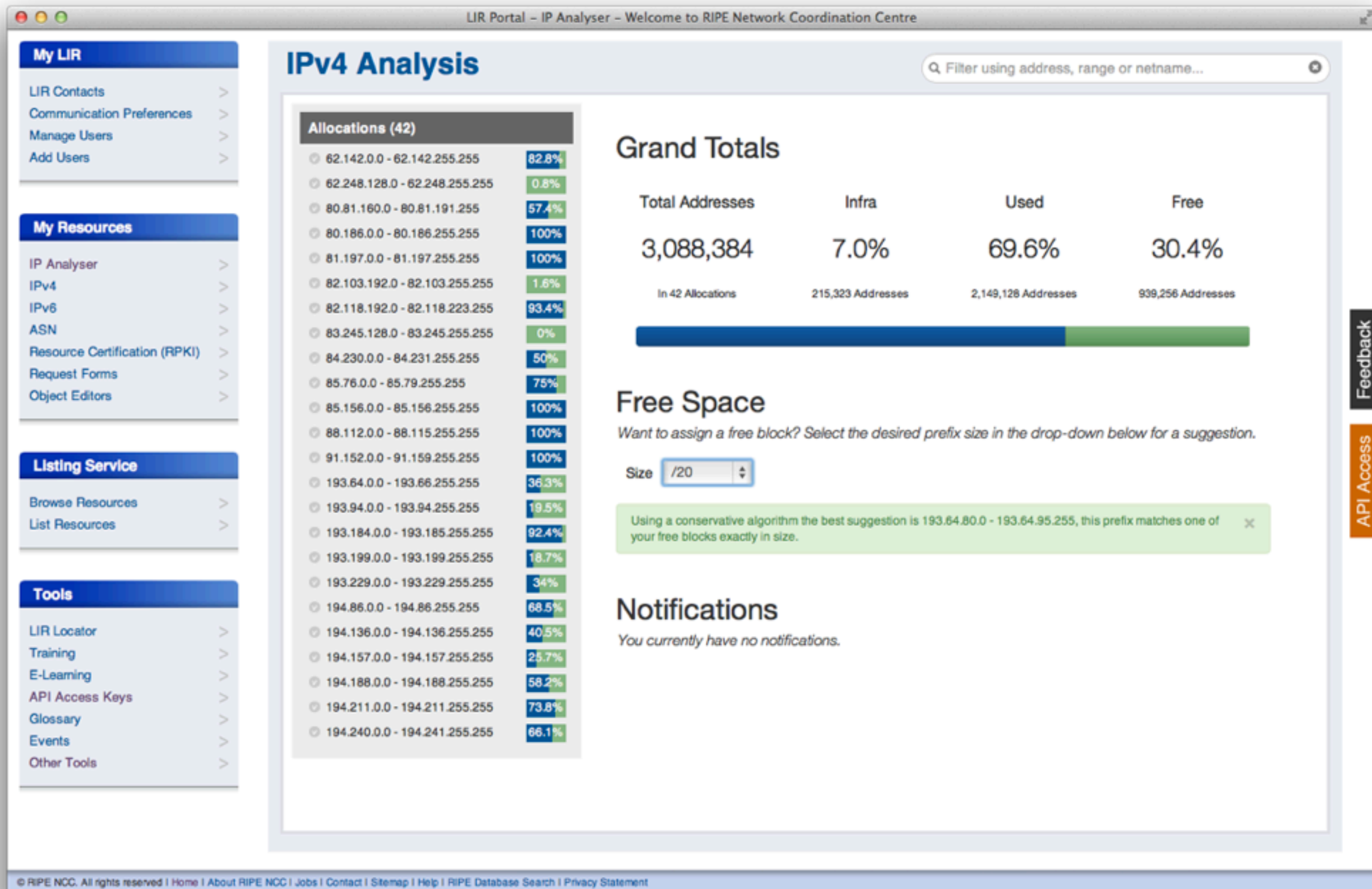
- Member Services

- Resource Distribution (IPv4, IPv6, ASNs)
- Resource Certification
- IP Analyser
- Training (LIRs, IPv6, RIPE Database)
 - webinars

- Public Services

- RIPE Database
- Reverse DNS
- Operating K-root server
- Open Meetings (RIPE, SEE, MENOG, ENOG)
- RIPE Labs
- RIPEstat
- RIPE Atlas

IP Analyser - <https://lirportal.ripe.net/ipanalyser/>



IP Analyser

- IPv4 feature set:
 - Shows all allocations and assignments
 - Shows free space, makes suggestions for assignments
 - Notifications of invalid assignments and steps to solve
- Data presented in:
 - User-friendly web page in the LIR Portal
 - JSON and plain text output through an API
- <https://lirportal.ripe.net/ipanalyser/>

RIPE Labs



What is RIPE Labs?

- It's a website - but more importantly, it is a platform and a tool **for the community**
- You can:
 - Test and evaluate new tools and prototypes
 - Contribute new ideas and research results
 - Provide feedback and discuss with others

labs.ripe.net

RIPE Labs Homepage



RIPE Labs
Innovative Internet tools & ideas [Register!](#)

- ✓ Share experience
- ✓ Showcase tools
- ✓ Present research

New contributions

RSS

0 comments **Using RIPE Atlas User Defined Measurements to Find the Most Popular Instances of a DNS Anycast Name Server**
Stéphane Bortzmeyer — May 03, 2013 09:30 AM

A DNS anycast name server has several physical instances, all behind the same IP address. Which one is used by a RIPE Atlas probe depends on the location of the probe in the BGP space. RIPE Atlas can query the physical identity of the probe and therefore help to determine which instances have the largest user base.

Tags: atlas

[Read more](#)

0 comments **New Dashboard View and More: RIPE Atlas Update April 2013**
Robert Kistelevi — Apr 26, 2013 08:55 AM



Our latest release includes a lot of new features, including completely new opening pages on the website for logged in users and the general public. We also have one-off measurements, APIs, new maps, probe sharing and more! Please find all the details below, and don't forget to tell us what you think.

Tags: atlas

[Read more](#)

[List of Articles](#)

[Statistics Dashboard](#)

Statistics

9163
Number of LIRs

16.23 Million
IPv4 Allocation Pool

5532
LIRs with IPv6

[View more statistics](#)

[RIPE NCC Roadmap](#)

RIPE NCC Roadmap

RIPE NCC Roadmap

[Tag Cloud](#)

tagcloud

allocation api ases atlas
certification country cpe

RIPE Labs Content

tagcloud

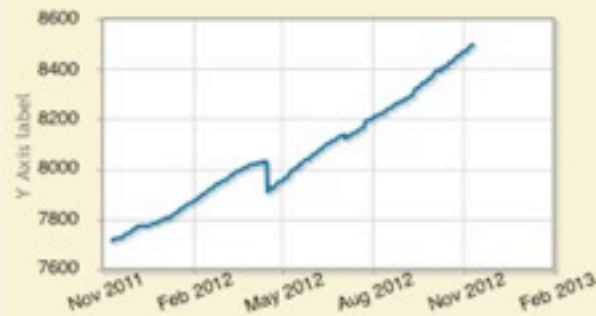
allocation api ases atlas
certification country cpe
database
datarepository dns
dnssec geolocation
ipv4 ipv6 ipv6day
ipv6launch ixp k-root lirs
measurements
membership pi policy
reputation rex ripe db ripe
meetings ripe ncc ripestat
root-servers routing
rpsl security statistics
syria tools

- Statistics and measurements
 - Routing, DNS, IPv4, IPv6, ...
- RIPE Database API and tools
- RIPE Atlas
- Tools (RIPEstat, Abuse Finder)
- And a lot more...
- Also external contributions

Statistics Dashboard

- All stats on one page
- Automatically updated
- Each graph is tagged
 - Easier to navigate

Total Number of LIRs

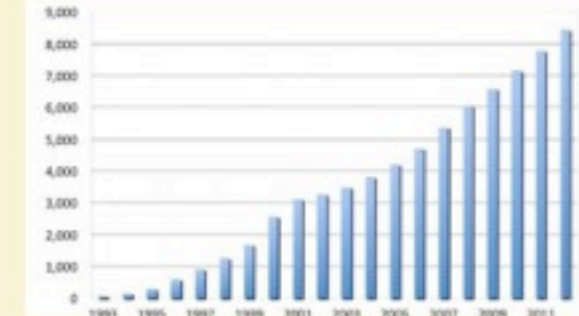


Current number of LIRs

8497

Tags: lirs

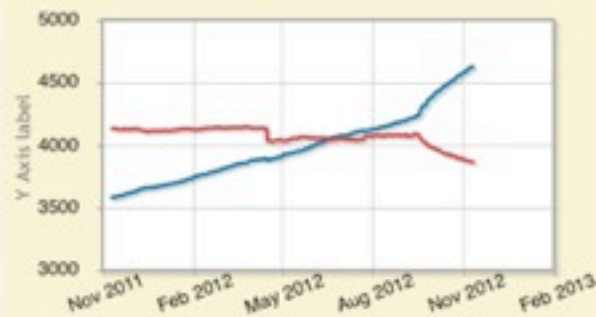
RIPE NCC Membership Statistics



Number of Local Internet Registries (LIRs) registered with the RIPE NCC per year. Note that the numbers for 2012 only show data until end of October 2012.

Tags: lirs

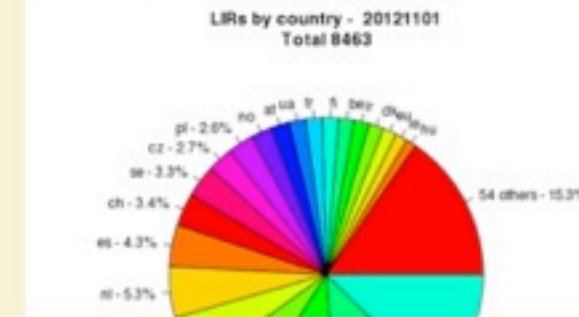
LIRs with and without IPv6



4630 | 3867

Tags: lirs ipv6

LIRs Sorted by Country

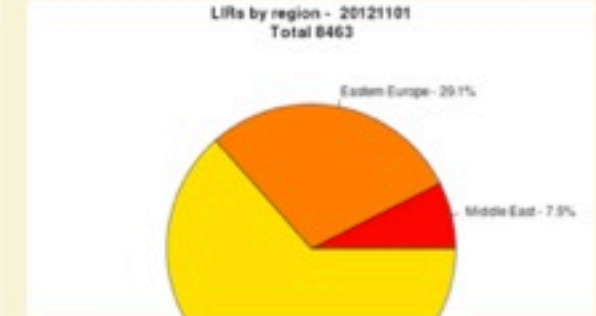


Current number of Local Internet Registries (LIRs) per country.

Tags: lirs

[View the full graph](#)

LIRs Sorted by Region



Current number of Local Internet Registries (LIRs) by region.

Number of Remaining IPv4 Addresses



Amount of available and reserved IPv4 addresses managed by the RIPE NCC.

labs.ripe.net/statistics

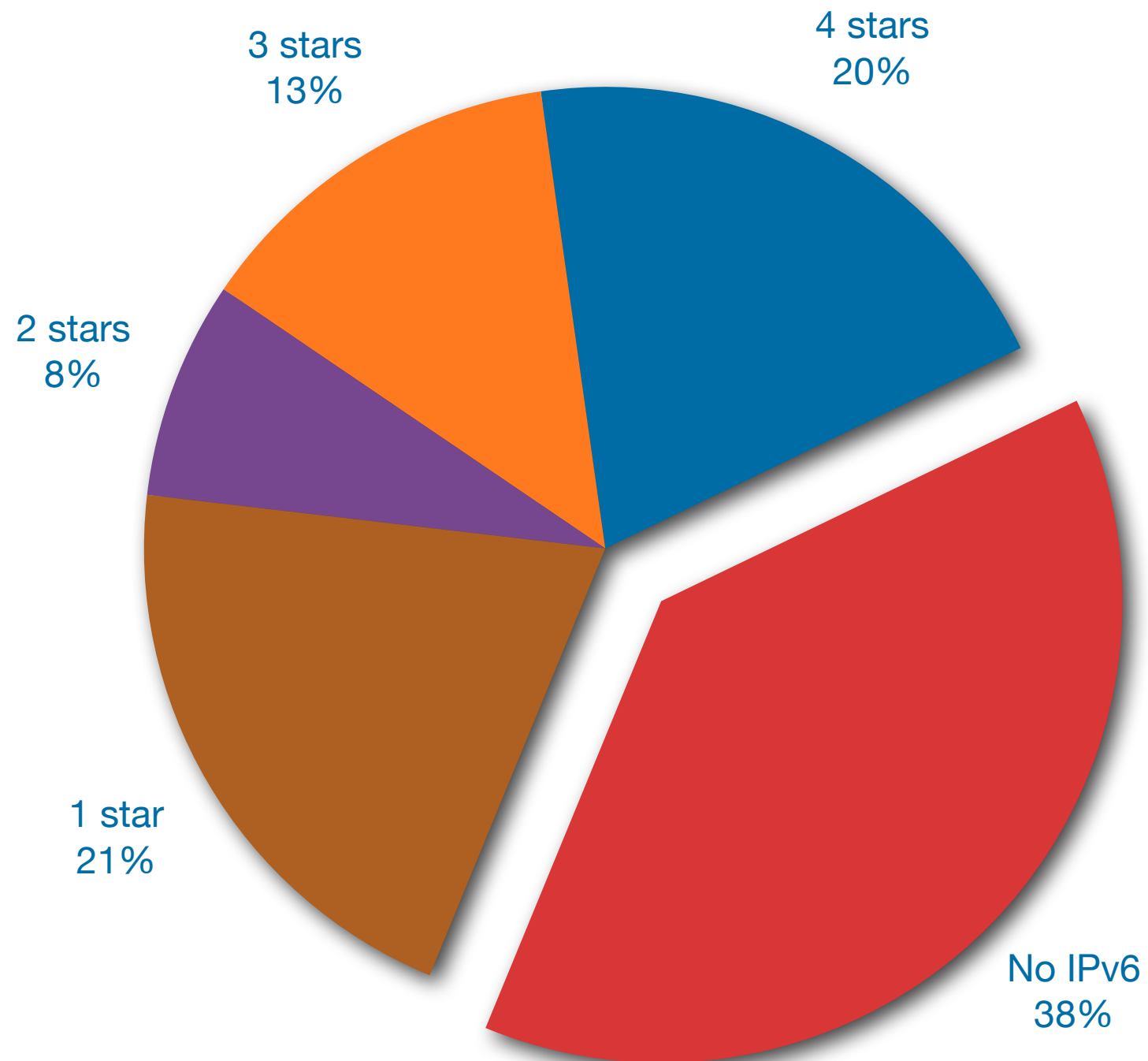
IPv6 RIPEness

- Rating system, members can earn “stars”
 - First star when receiving an IPv6 allocation
 - Additional stars when
 - It is announced on the Internet
 - A **route6** object is created
 - Reverse DNS is set up

ipv6ripeness.ripe.net

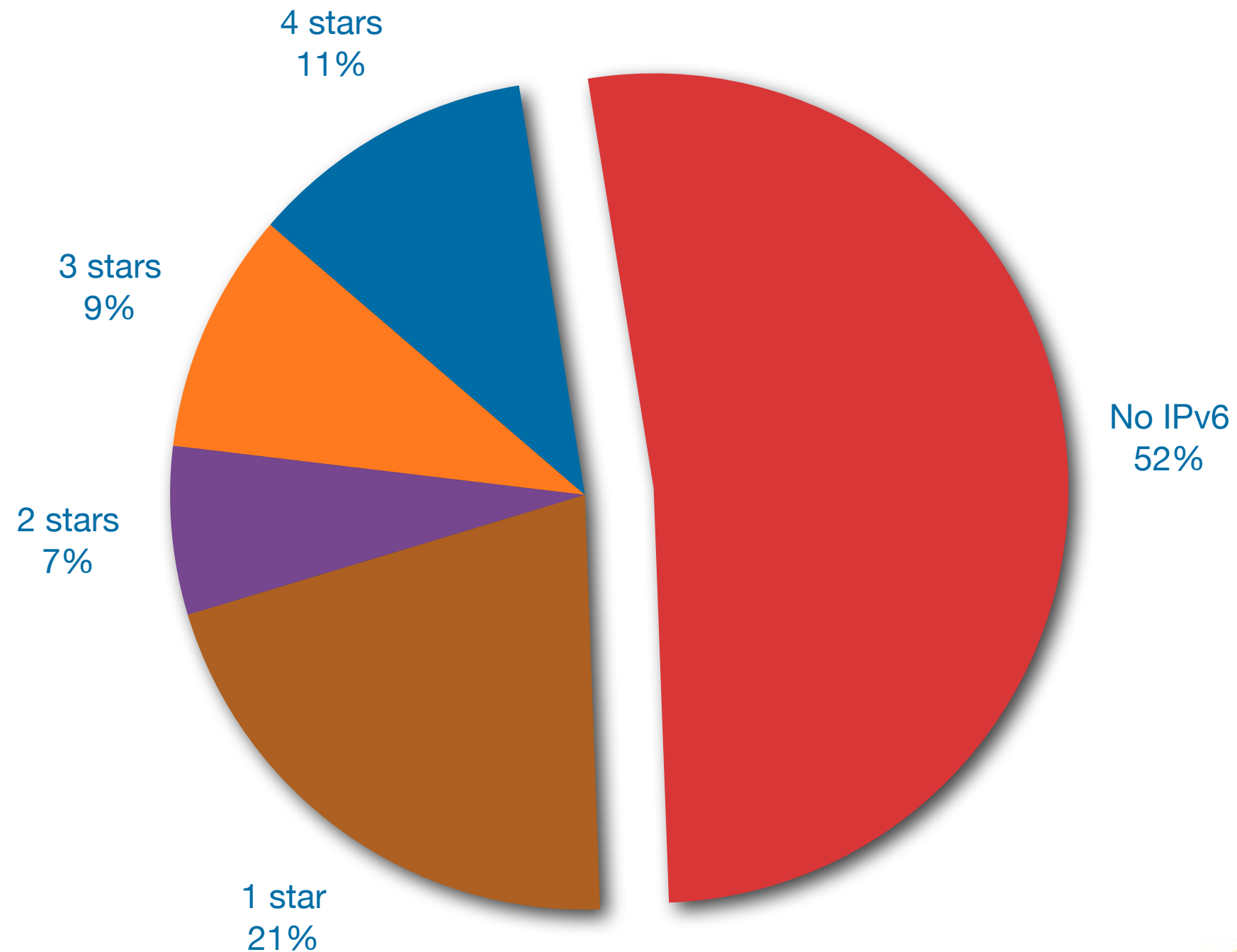
IPv6 RIPEness (9,232 LIRs)

● 1 star ● 2 stars ● 3 stars ● 4 stars ● No IPv6



IPv6 RIPEness in Italy (564 LIRs)

● 1 star ● 2 stars ● 3 stars ● 4 stars ● No IPv6



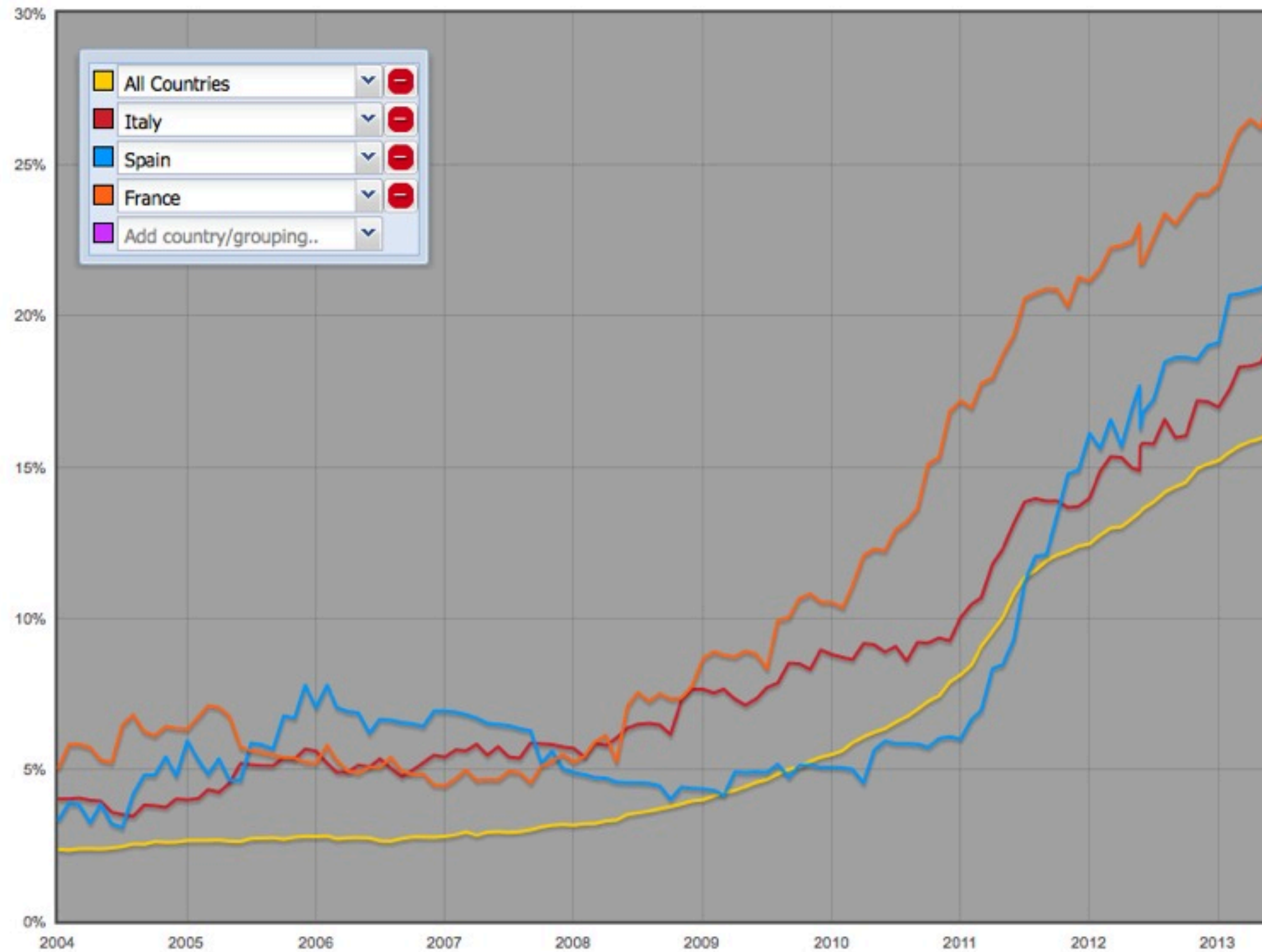
IPv6 RIPEness Deployment - Fifth Star

- LIRs providing content over IPv6
 - Based on Alexa 1M list
- LIRs providing IPv6 access to end users
 - Based on APNIC's Flash-based Google ads

All LIRs offering services in Austria

Access (last 6 months)	Access (last month)	Content	LIR
17.7 %	17.9 %	16.5 %	ACONET
37.5 %	100.0 %		APA - Austria Presse Agentur reg. Gen.m.b.H.
7.2 %		5.1 %	ASCUS Telecom GmbH
28.6 %	33.3 %		Citycom Telekommunikation GmbH
25.0 %			Elektrizitätswerk Wels AG
2.9 %			Infotech EDV-Systeme GmbH
100.0 %			Nessus GmbH
100.0 %			SelfNet Internet Ges.m.b.H.
15.1 %		4.0 %	Tele2 Telecommunication GmbH

ASNs Announcing IPv6 Prefixes



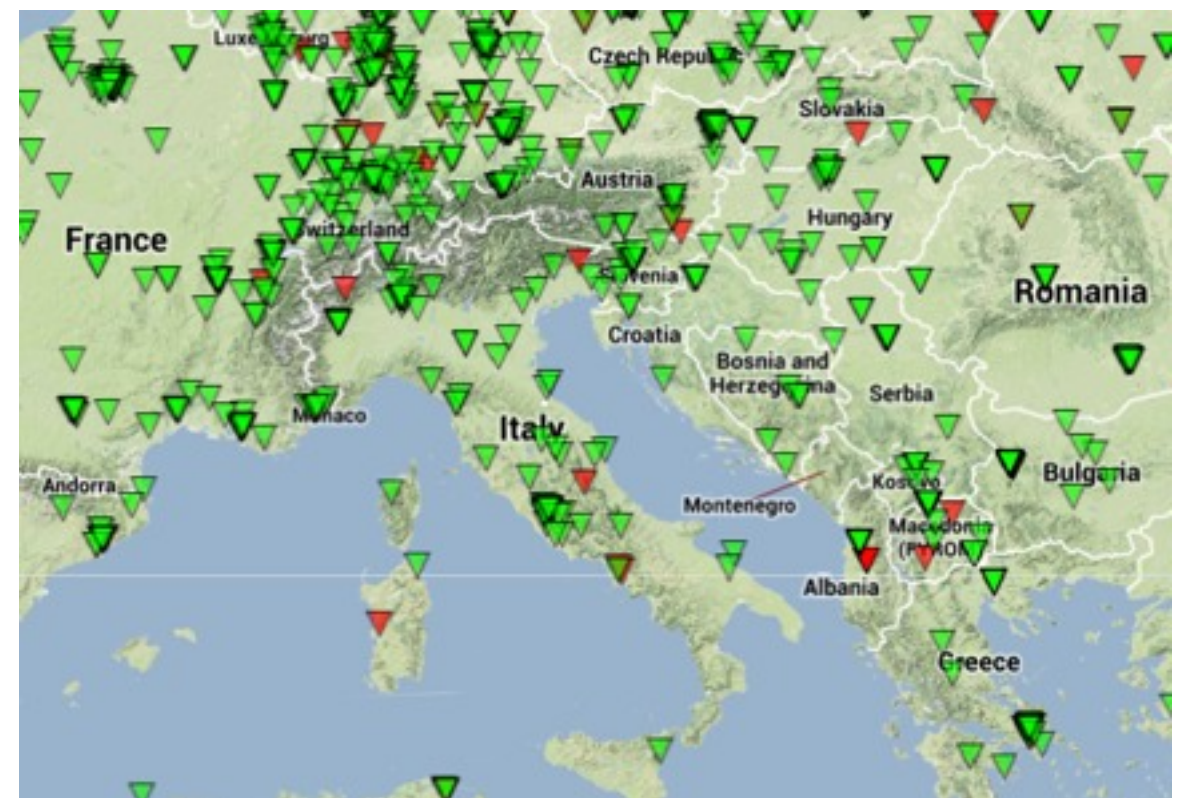
Mirjam Kühne, 21 June 2013

RIPE Atlas



RIPE Atlas - Active Measurements Network

- Over 3,000 measurement nodes
 - Probes run different measurements
 - ping, traceroute, SSL, DNS
 - Define your own measurements
 - Data publicly available
 - Measurement code public
 - Various APIs available



labs.ripe.net/atlas

RIPE Atlas Use Cases



- Effects storm Sandy had on parts of Internet
- <https://labs.ripe.net/Members/mirjam/sandy-2012>

Name server instance	Nr. of probes connecting to instance	Percentage
dns.th2.nic.fr	173	36%
dns.fra.nic.fr	173	36%
dns.lon.nic.fr	47	10%
dns.lyn2.nic.fr	29	6%
dns.lyn1.nic.fr	25	5%
dns.bru.nic.fr	19	4%
dns.ix1.nic.fr	18	4%

- Find most popular instances of DNS anycast servers

RIPEstat



RIPEstat - Toolbox

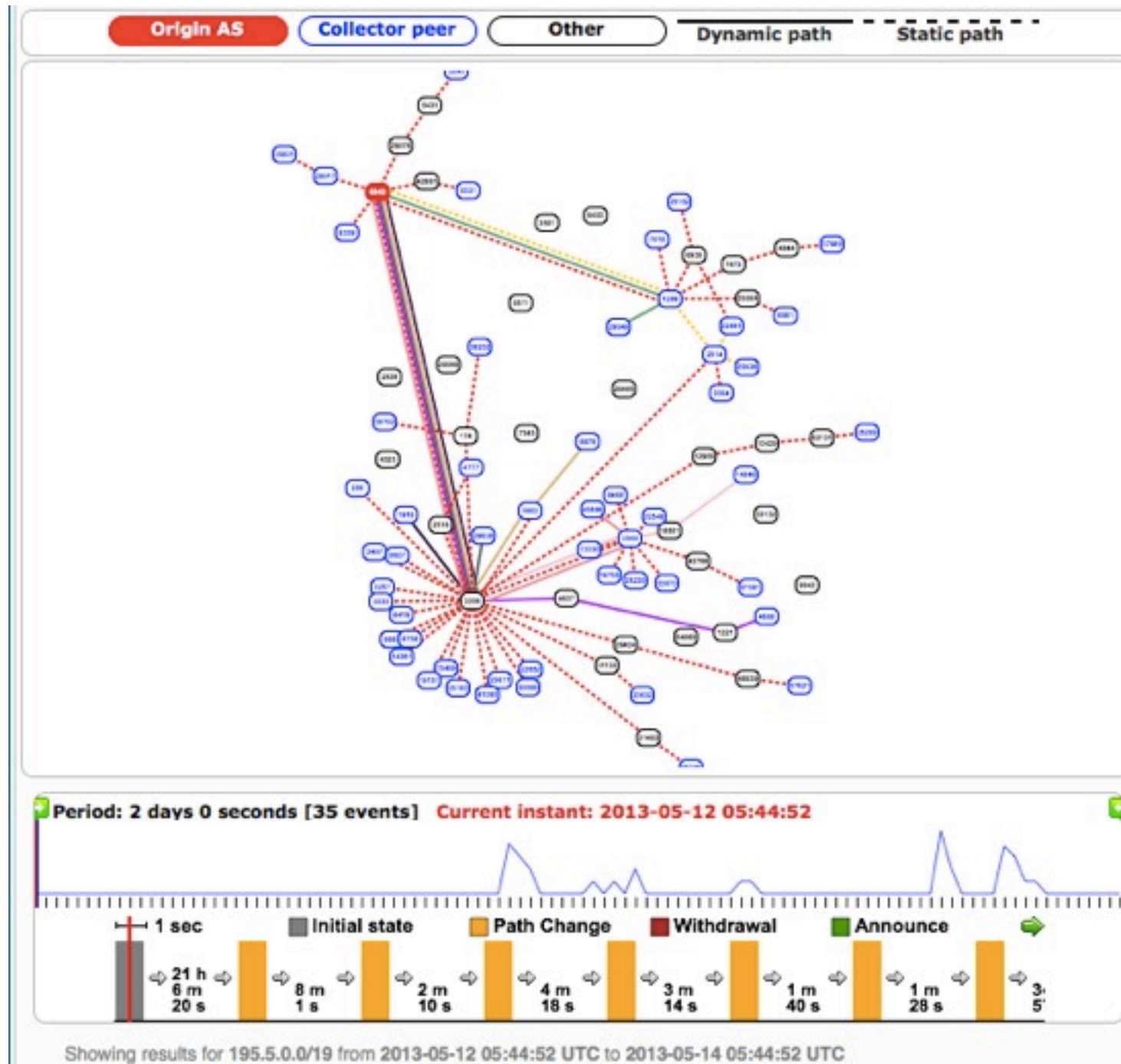
The screenshot displays the RIPEstat website interface. At the top, there is a search bar labeled "RIPEstat" with a placeholder "Get information on an AS number or IP prefix". Below the search bar, it shows "Your network: AS3333, 193.0.20.0/23" and "e.g. IPv4 prefix/range, IPv6, ASN". A navigation bar contains a "Sign in" button and a "GO" button. The main content area is divided into several widgets:

- Resource Overview (AS3333):** Displays "RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)". It shows results from 2012-11-10 15:26:00Z to 2012-11-13 15:26:00Z. Below the title are links for "source data", "embed code", "permalink", and "info".
- Registry Browser (AS3333):** Displays details for "aut-num: AS3333". The details include:
 - 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-MNTIt also shows "Showing results for AS3333 as of 2012-11-13 15:26:44Z".
- Geoloc (AS3333):** Displays a map of Europe with a location pin in Germany. It includes a "Map" button and a "Satellite" button. Below the map is a "Geoloc details" section showing results for AS3333 as of 2012-11-01 00:00:00Z. It also has links for "source data", "embed code", "permalink", and "info".
- Routing Status (AS3333):** Displays a green checkmark icon and the text "AS3333 is visible by 100% of 100 IPv4 and 100% of 88 IPv6 RIS full peers." Below this, it shows "First ever seen before Jan 2001." and a list of statistics:
 - Originated IPv4 prefixes: 6
 - Originated IPv6 prefixes: 1
 - Observed BGP neighbours: 167
 - Address space announced (IPv4): 4608 IPs
 - Address space announced (IPv6): equiv. to 1 /48s

- One-stop shop
 - All data in one place
 - Routing, IP, geoloc, Black Lists, etc.
 - Graphical interface
 - Nearly 40 widgets & growing
- Updates on RIPE Labs
 - User feedback important!

stat.ripe.net

New BGPlay Integrated in RIPEstat



- Popular demand
- Improved visualisation
- Collaboration with Roma Tre University

Country Routing Statistics

- IPv4, IPv6, ASNs per country over time

stat.ripe.net/widget/country-routing-stats

- Compare with another country

stat.ripe.net/special/country-comparison



RIPE NCC Survey 2013

- RIPE NCC will use results to assess and evaluate our services and activities
- Open to anybody!
- Takes 15 - 20 minutes
- Please fill in the survey for a chance win an iPad mini!

ripe.net/survey2013

- Next RIPE Meeting: 14 - 18 October in Athens

Questions?

