

# RIPE NCC Services & Activities

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

Mirjam Kühne, RIPE NCC



# Overview

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

# RIPE NCC

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- 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



Mirjam Kühne, 21 June 2013

# RIPE NCC Activities

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- 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/>

LIR Portal - IP Analyser - Welcome to RIPE Network Coordination Centre

### My LIR

- LIR Contacts >
- Communication Preferences >
- Manage Users >
- Add Users >

### My Resources

- IP Analyser >
- IPv4 >
- IPv6 >
- ASN >
- Resource Certification (RPKI) >
- Request Forms >
- Object Editors >

### Listing Service

- Browse Resources >
- List Resources >

### Tools

- LIR Locator >
- Training >
- E-Learning >
- API Access Keys >
- Glossary >
- Events >
- Other Tools >

## IPv4 Analysis

Filter using address, range or netname...

### Allocations (42)

62.142.0.0 - 62.142.255.255	82.8%
62.248.128.0 - 62.248.255.255	0.8%
80.81.160.0 - 80.81.191.255	57.4%
80.186.0.0 - 80.186.255.255	100%
81.197.0.0 - 81.197.255.255	100%
82.103.192.0 - 82.103.255.255	1.6%
82.118.192.0 - 82.118.223.255	93.4%
83.245.128.0 - 83.245.255.255	0%
84.230.0.0 - 84.231.255.255	50%
85.76.0.0 - 85.79.255.255	75%
85.156.0.0 - 85.156.255.255	100%
88.112.0.0 - 88.115.255.255	100%
91.152.0.0 - 91.159.255.255	100%
193.64.0.0 - 193.66.255.255	36.3%
193.94.0.0 - 193.94.255.255	19.5%
193.184.0.0 - 193.185.255.255	92.4%
193.199.0.0 - 193.199.255.255	18.7%
193.229.0.0 - 193.229.255.255	34%
194.86.0.0 - 194.86.255.255	68.5%
194.136.0.0 - 194.136.255.255	40.5%
194.157.0.0 - 194.157.255.255	25.7%
194.188.0.0 - 194.188.255.255	58.2%
194.211.0.0 - 194.211.255.255	73.8%
194.240.0.0 - 194.241.255.255	66.1%

## Grand Totals

Total Addresses	Infra	Used	Free
3,088,384	7.0%	69.6%	30.4%
In 42 Allocations	215,323 Addresses	2,149,128 Addresses	939,256 Addresses

## Free Space

Want to assign a free block? Select the desired prefix size in the drop-down below for a suggestion.

Size

Using a conservative algorithm the best suggestion is 193.64.80.0 - 193.64.95.255, this prefix matches one of your free blocks exactly in size. ✕

## Notifications

You currently have no notifications.

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Feedback  
API Access

# IP Analyser

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- 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?

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- 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](http://labs.ripe.net)**

# RIPE Labs Homepage

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

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

Statistics Dashboard

## 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 Kisteleki — 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

<b>9163</b> Number of LIRs	<b>16.23 Million</b> IPv4 Allocation Pool
<b>5532</b> LIRs with IPv6	<a href="#">View more statistics</a>

RIPE NCC Roadmap

### RIPE NCC Roadmap

Tag Cloud

### tagcloud

allocation api ases atlas certification country cpe

# RIPE Labs Content

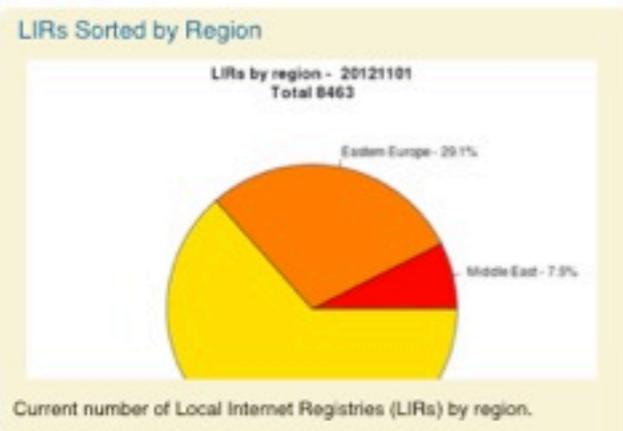
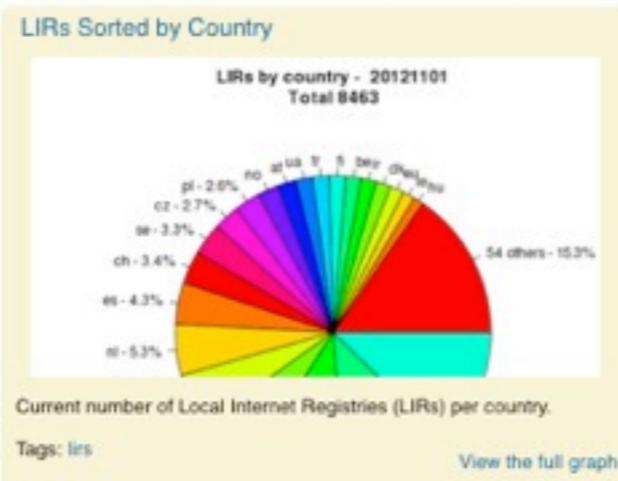
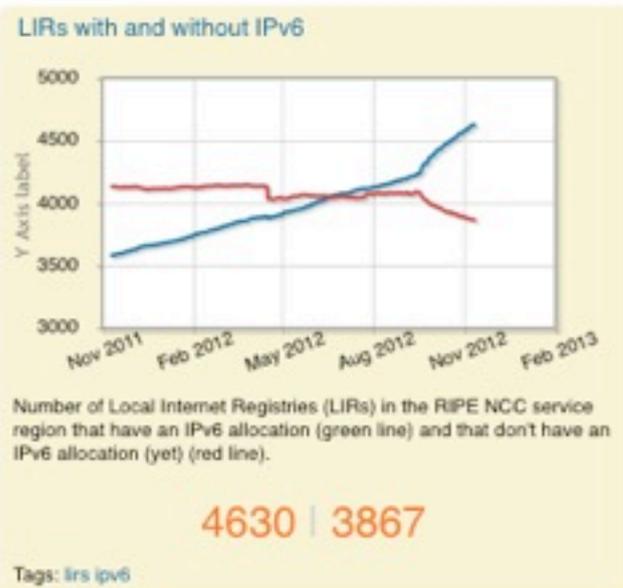
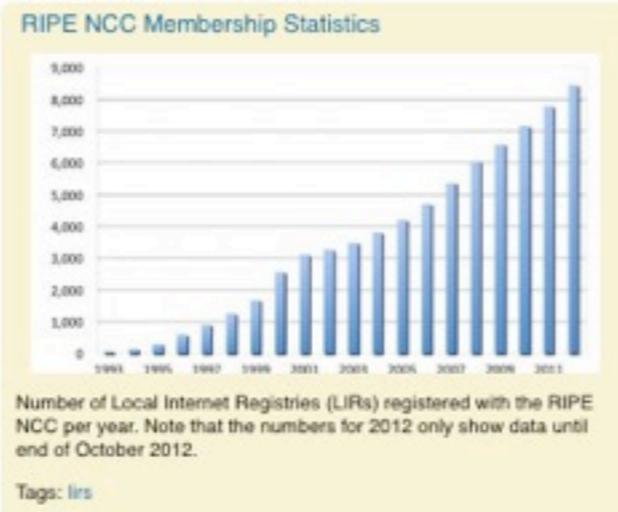
## tagcloud

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



[labs.ripe.net/statistics](http://labs.ripe.net/statistics)



# IPv6 RIPEness

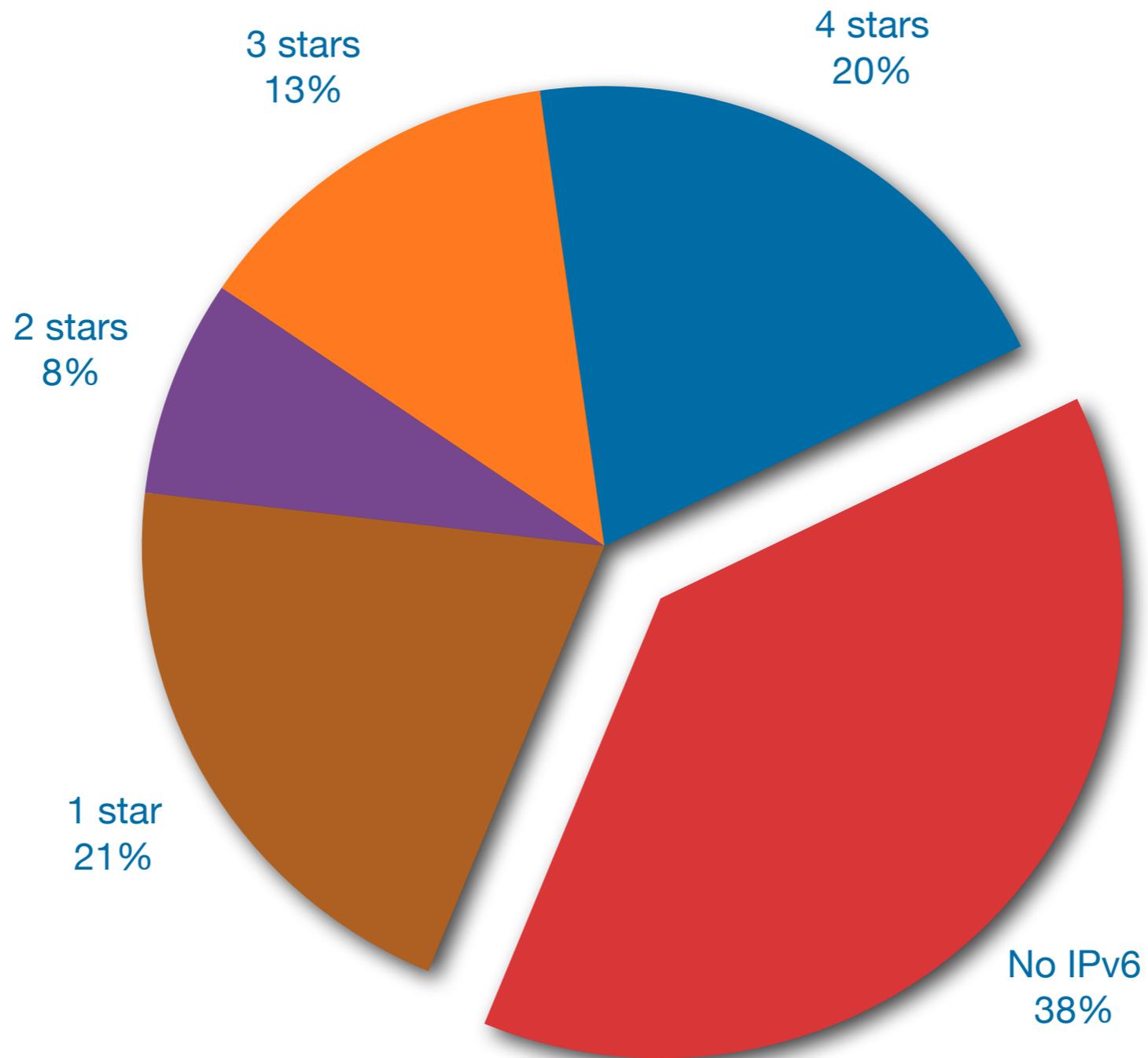
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- Rating system, members can earn “stars”
  - First star when receiving an IPv6 allocation
  - Additional stars when
    - It is announced on the Internet
    - A **route6** object is created
    - Reverse DNS is set up

[ipv6ripeness.ripe.net](http://ipv6ripeness.ripe.net)

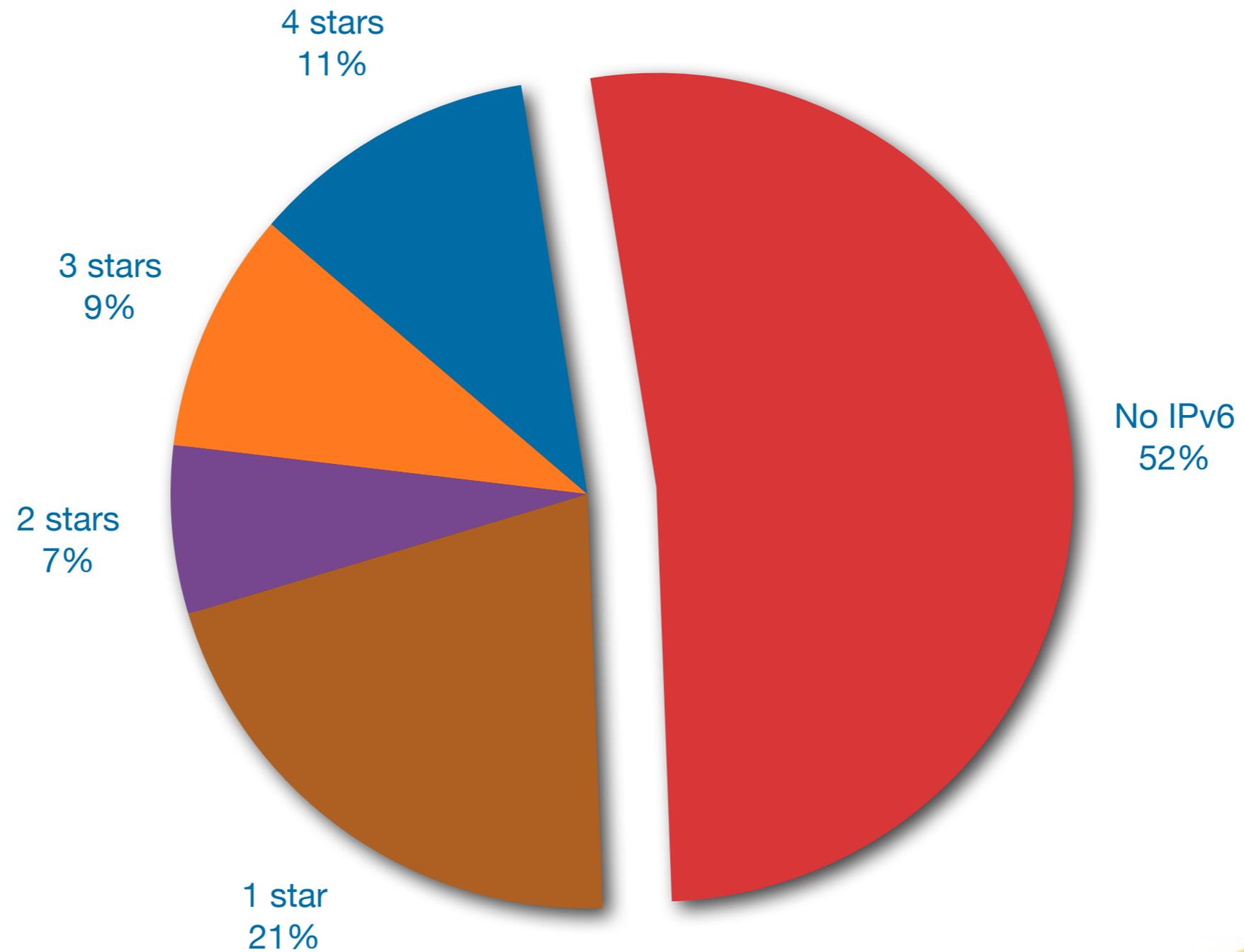
# IPv6 RIPEness (9,232 LIRs)

● 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



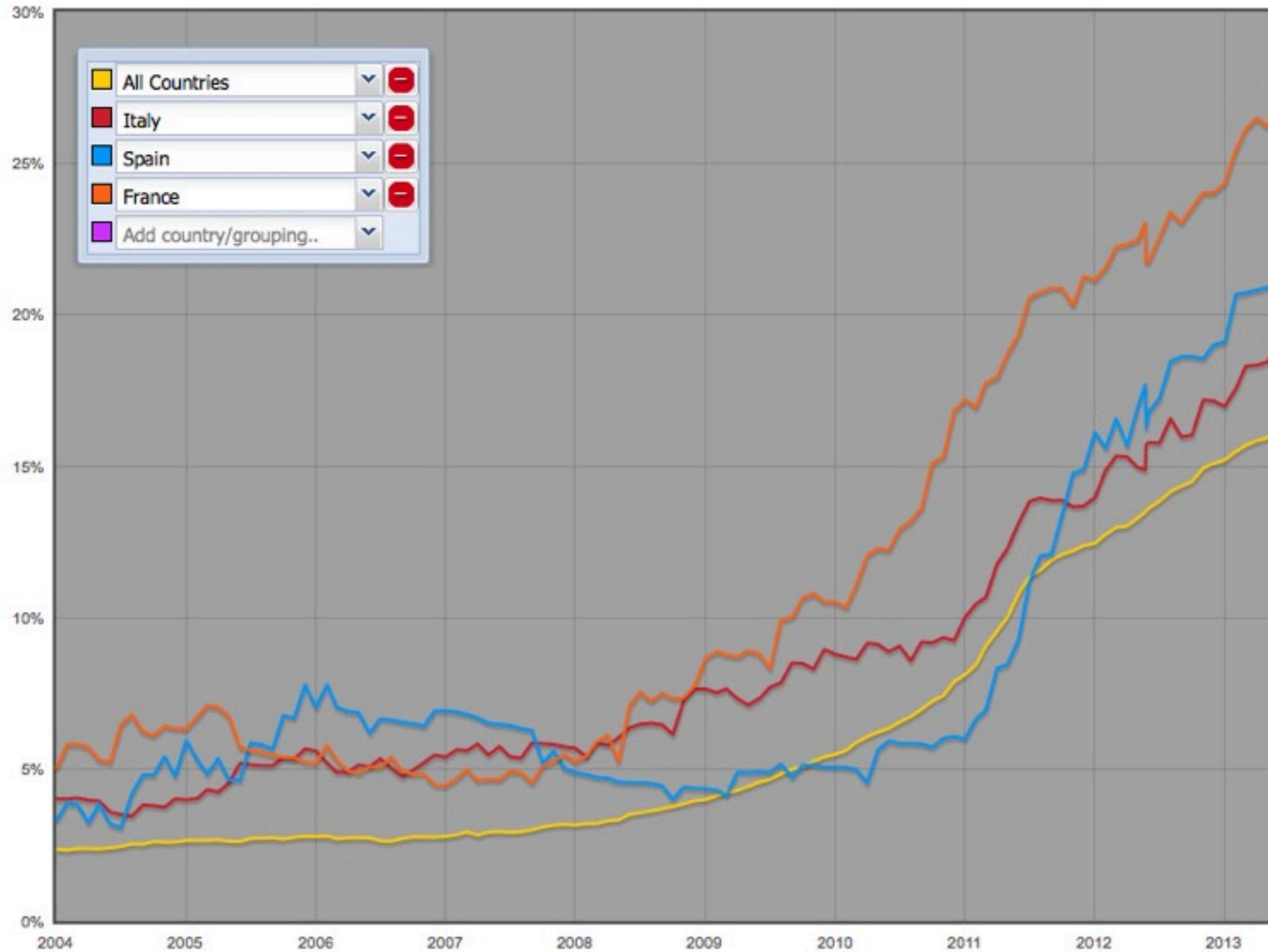
# IPv6 RIPEness Deployment - Fifth Star

- 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

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

# ASNs Announcing IPv6 Prefixes



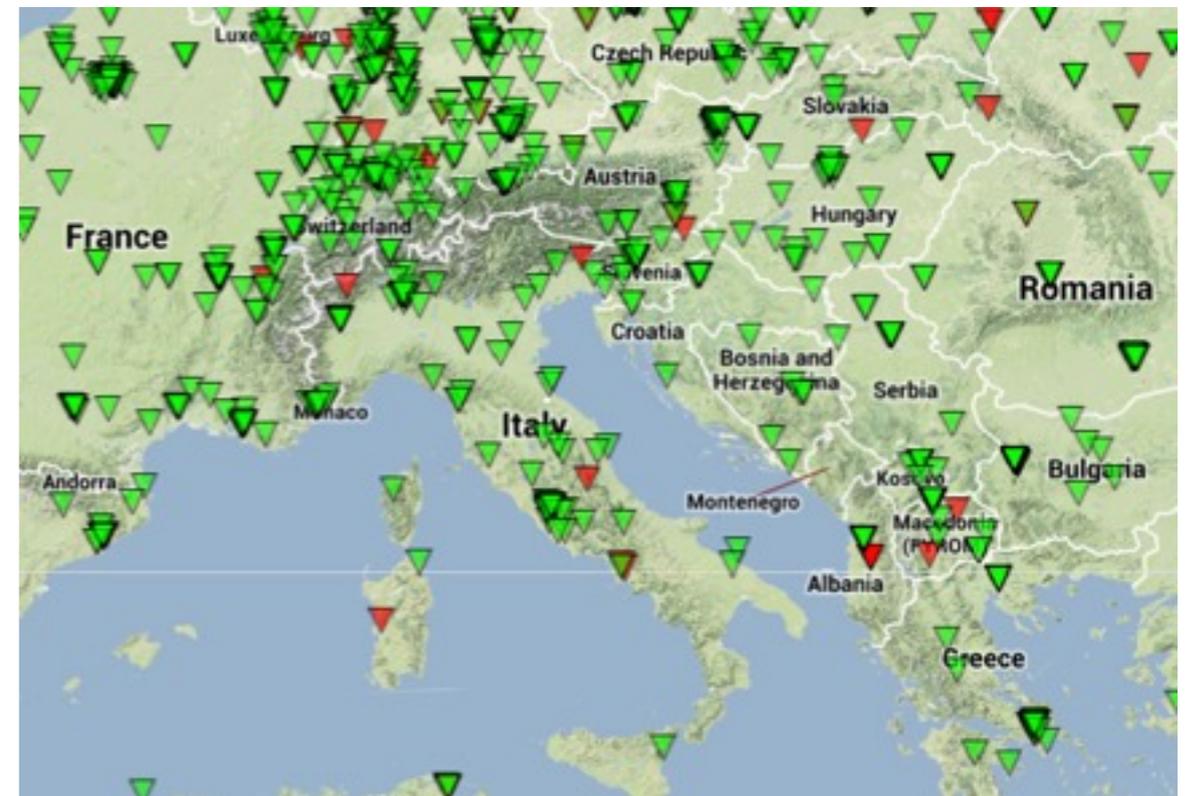
Mirjam Kühne, 21 June 2013

# 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](https://labs.ripe.net/atlas)

# RIPE Atlas Use Cases



- Effects storm Sandy had on parts of Internet

- <https://labs.ripe.net/Members/mirjam/sandy-2012>

- Find most popular instances of DNS anycast servers

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%

# RIPEstat



# RIPEstat - Toolbox

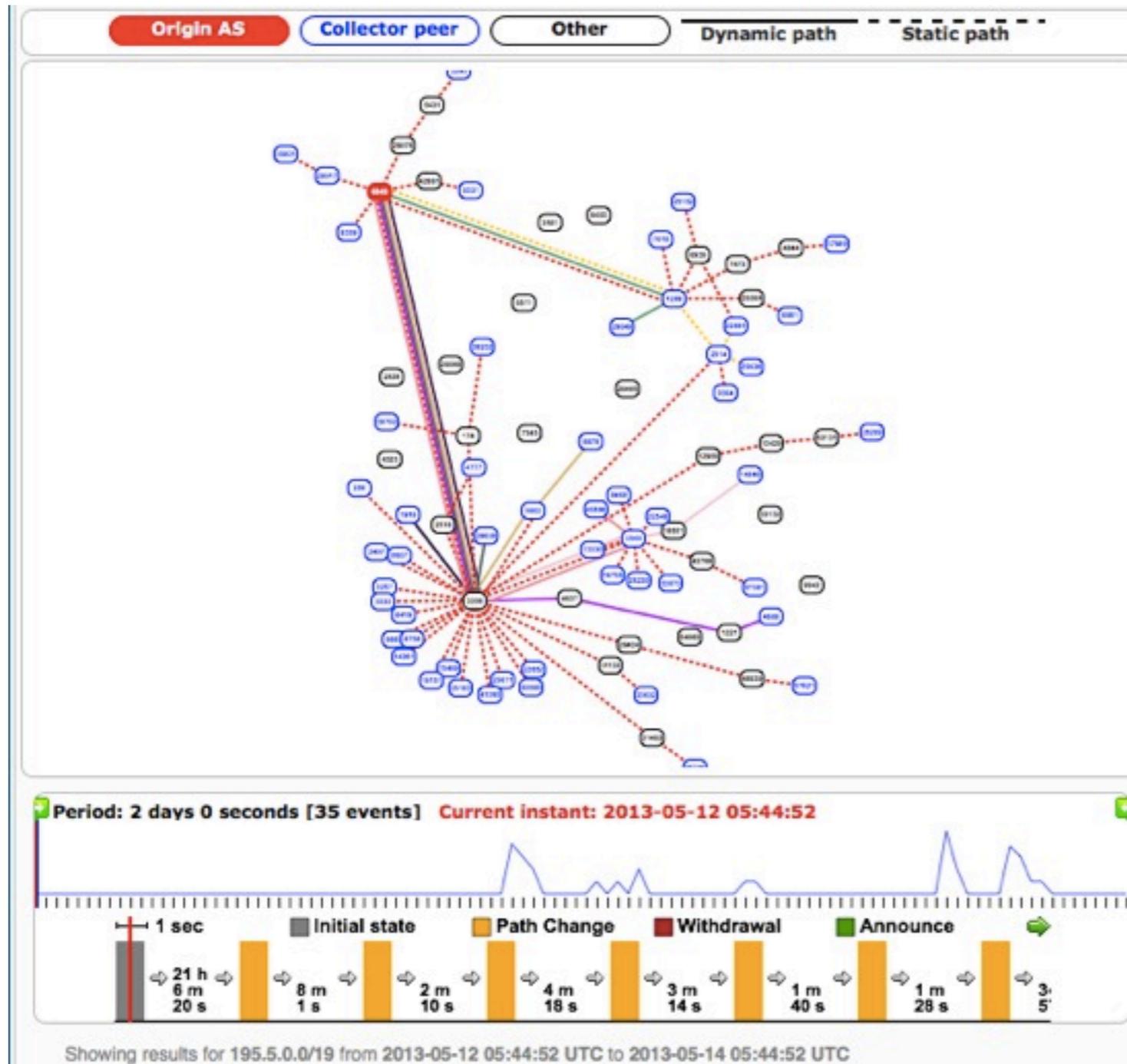
The screenshot displays the RIPEstat website interface. At the top, there is a search bar with the text "RIPEstat" and a "Sign in" button. Below the search bar, there is a navigation menu with options like "source data", "embed code", "permalink", and "info". The main content area is divided into several widgets:

- Resource Overview (AS3333):** Shows the RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC) with a "Showing results from 2012-11-10 15:26:00Z to 2012-11-13 15:26:00Z" timestamp.
- Geoloc (AS3333):** A map showing the location of AS3333 in Europe, with a "Showing results for AS3333 as of 2012-11-01 00:00:00Z" timestamp.
- Registry Browser (AS3333):** A table listing details for AS3333, including as-name, descr, org, admin-c, tech-c, mnt-by, and mnt-by.
- Routing Status (AS3333):** A green box indicating that AS3333 is visible by 100% of 100 IPv4 and 100% of 88 IPv6 RIS full peers. It also includes a note "First ever seen before Jan 2001." and statistics for originated IPv4 and IPv6 prefixes, observed BGP neighbours, and address space announced.

- 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](http://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](http://stat.ripe.net/widget/country-routing-stats)

- Compare with another country

[stat.ripe.net/special/country-comparison](http://stat.ripe.net/special/country-comparison)



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# RIPE NCC Survey 2013

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- 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](http://ripe.net/survey2013)**

- Next RIPE Meeting: 14 - 18 October in Athens

# Questions?

