

Tools & Measurements

IEPG, IETF 86, Orlando, 10 March 2013

Mirjam Kühne, RIPE NCC



Overview

- New developments in RIPE Atlas
- New developments in RIPEstat
- Other RIPE Labs highlights

RIPE Atlas



RIPE Atlas - Active Measurements Network

- Next generation Internet measurements network
 - Thousands of measurement nodes
 - Probes run different measurements
 - ping, traceroute, SSL, DNS
- Instead of building small, individual, private infrastructures, build a HUGE common infrastructure that serves both private and community goals

<http://labs.ripe.net/atlas>



RIPE Atlas Update

- 2,700 active probes and 6,000 users worldwide
 - Increasing number of requests
 - Working on next version of probes
- RIPE Atlas anchors pilot started (10 volunteers)
 - Collecting data from surrounding RIPE Atlas probes
 - Acting as targets for measurements
- New generation probes
 - TP-LINK TL-MR 3020

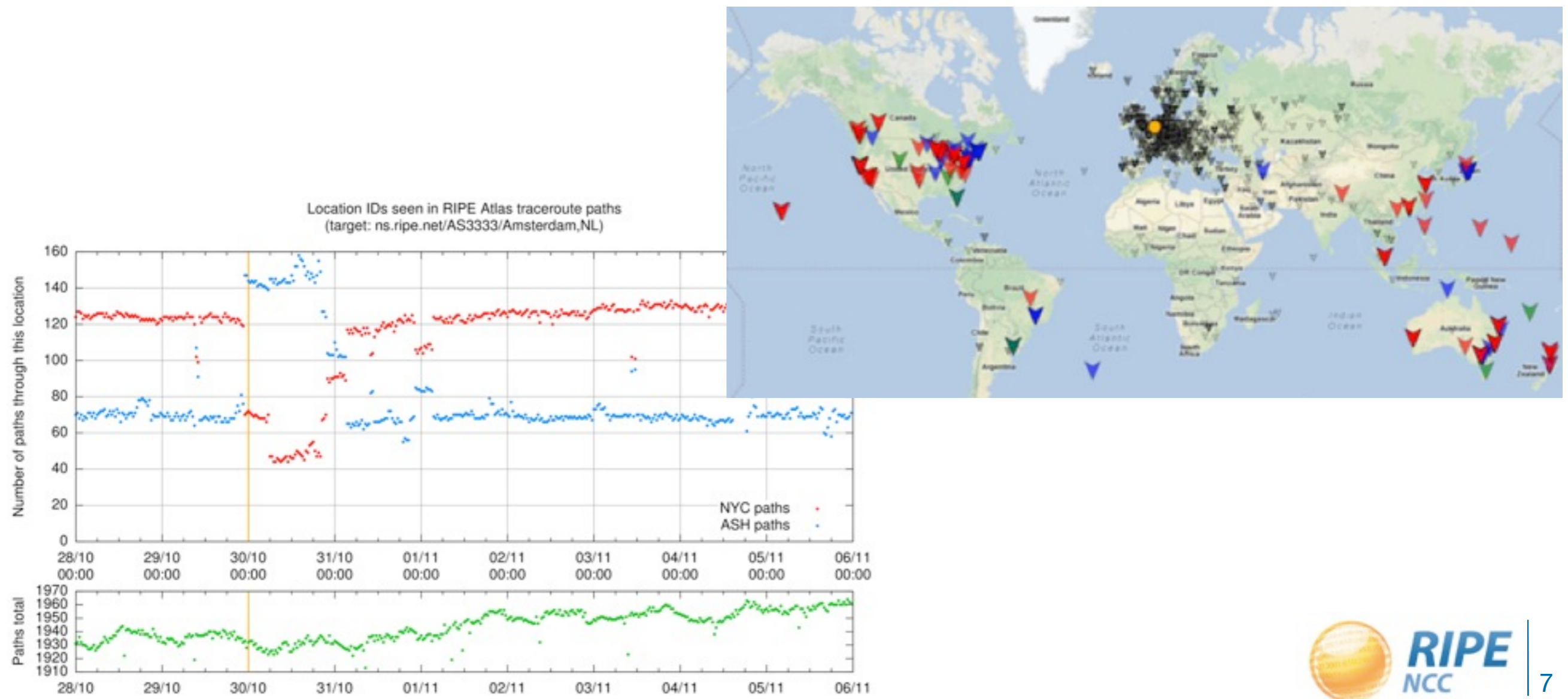


Currently Under Development

- APIs to interact with the system
 - Probe API: info about vantage points
 - Measurement API: info about measurements
 - API key to download measurement results owned by user
- One-off measurements
 - Allowing for immediate, one-time measurements
 - In addition to user-defined measurements

Measuring Storm Sandy with RIPE Atlas

- RIPE Atlas probes on East Coast US unavailable during storm Sandy
- Storm had an effect on other parts of Internet



RIPEstat



RIPEstat - <https://stat.ripe.net>

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 items like "Resource Overview (AS3333)", "Registry Browser (AS3333)", "Geoloc (AS3333)", and "Routing Status (AS3333)". The main content area is divided into several widgets:

- Resource Overview (AS3333):** Shows the name "RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)" and a date range from 2012-11-10 to 2012-11-13.
- Registry Browser (AS3333):** Displays a list of attributes for the AS3333, including:
 - 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
- Geoloc (AS3333):** Shows a map of Europe with a location marker for "Net1" in Amsterdam, Netherlands, and a "100.00%" visibility indicator.
- Routing Status (AS3333):** Displays routing information, including a green checkmark indicating 100% visibility by 100 IPv4 and 100% of 88 IPv6 RIS full peers. It also lists other statistics like "First ever seen before Jan 2001", "Originated IPv4 prefixes: 6", "Originated IPv6 prefixes: 1", "Observed BGP neighbours: 167", "Address space announced (IPv4): 4808 IPs", and "Address space announced (IPv6): equiv. to 1 /48s".

• Toolbox

- All data in one place
- Routing, IP, geoloc, BLs, etc.
- Graphical interface
- Over 40 widgets

• Updates on RIPE Labs

- Collaboration with users



What's new in RIPEstat

- New interface
- Command-line interface
 - Text-based server on port 43
- Various new widgets
- Next: more country-based widgets and more comparison views

Please give us feedback

New RIPEstat Interface

RIPEstat

Your network: **AS3333, 2001:67c:2e8::/48** e.g. IPv4 prefix/range, IPv6, ASN

RIPEstat is your source for Internet-related stats & status — stat! [learn more...](#)

Welcome,
Mirjam Kühne
([sign out](#))

Permalink

At a Glance (4)

Routing (7)

DNS (1)

Anti Abuse (1)

Database (9)

Geographic (2)

Resource Overview (2001:67c:2e8::/48)

This prefix is announced by

AS3333
RIPE-NCC-AS - Reseaux IP Europeens Network Coordination Centre (RIPE NCC)

Showing results for 2001:67c:2e8::/48 as of 2012-11-07 00:00:00Z

[source data](#) [embed code](#) [permalink](#) [info](#)


Registry Browser (2001:67c:2e8::/48)

inet6num:
2001:67c:2e8::/48

netname	RIPE-NCC-NET
descr	Reseaux IP Europeens Network Coordination Centre (RIPE NCC)
org	ORG-RIEN1-RIPE
country	NL
admin-c	JDR-RIPE
admin-c	BRD-RIPE
tech-c	OPS4-RIPE
status	ASSIGNED PI
mnt-by	RIPE-NCC-END-MNT
mnt-lower	RIPE-NCC-END-MNT
mnt-by	RIPE-NCC-MNT
mnt-routes	RIPE-NCC-MNT
mnt-domains	RIPE-NCC-MNT

Showing results for 2001:67c:2e8::/48 as of 2012-11-08 12:15:39Z

Geoloc (2001:67c:2e8::/48)



Map Satellite

Address space without geographic information: **100.00%**

Geoloc details

Showing results for 2001:67c:2e8::/48 as of 2012-11-08 00:00:00Z

[source data](#) [embed code](#) [permalink](#) [info](#)

Routing Status (2001:67c:2e8::/48)

2001:67c:2e8::/48 is 100% visible (by 88 of 88 RIS full peers).

First ever seen announced by **AS3333**, on **2010-09-28 16:00:00Z**.

Originated by: **AS3333** (valid route object in RIPE)

No less-specific covering prefixes.

Compare to 1 week earlier

Showing results for 2001:67c:2e8::/48 as of 2012-11-07 00:00:00Z

[source data](#) [embed code](#) [permalink](#) [info](#)

Tabbed layout

New
'At a Glance'
view

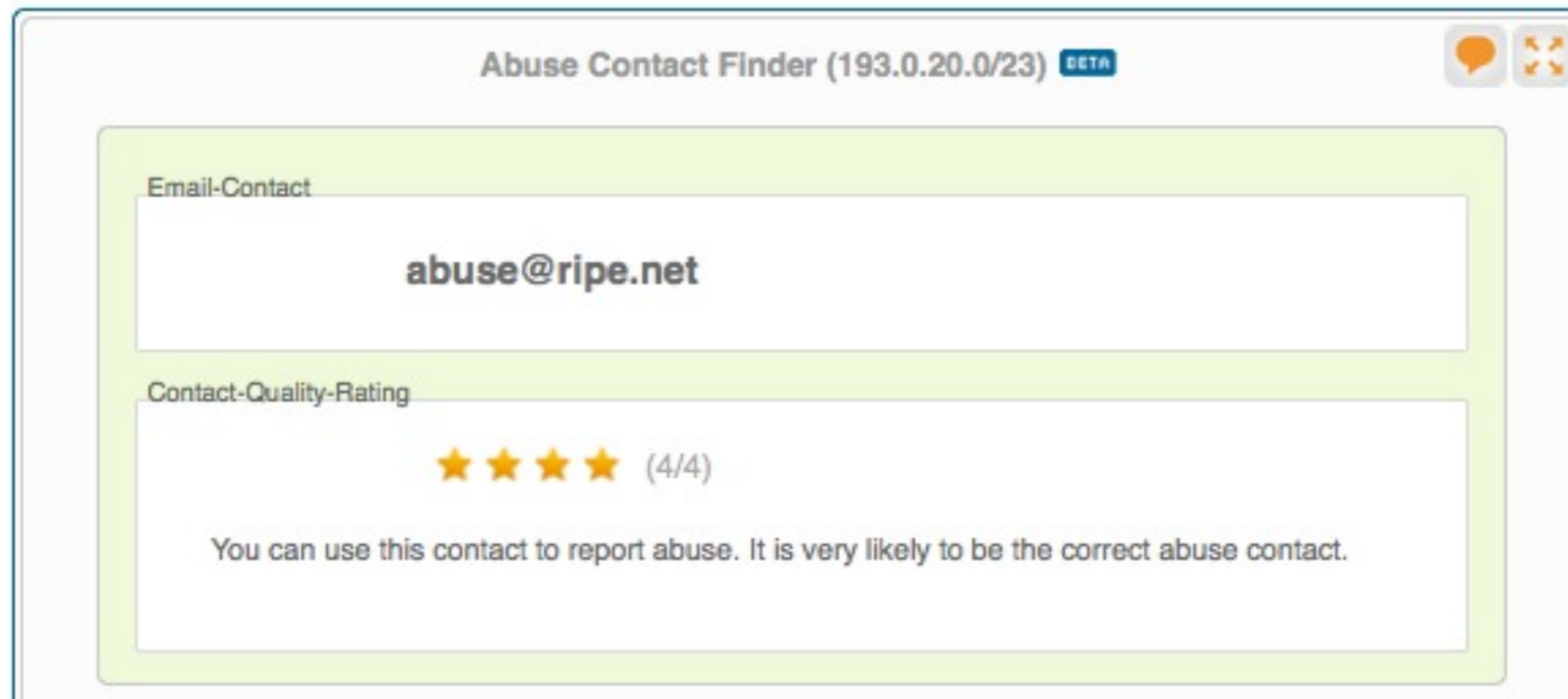
Country Routing Statistics

- IPv4, IPv6, ASNs per country over time
 - <https://stat.ripe.net/widget/country-routing-stats>
- Compare with another country
 - <https://stat.ripe.net/special/country-comparison>



Anti-Abuse Contact Finder

- Finds potential contacts to report abuse cases
 - <https://stat.ripe.net/special/abuse>
- Rates the quality of the information found
- New policy requires abuse-c attribute in DB



RIPE Labs



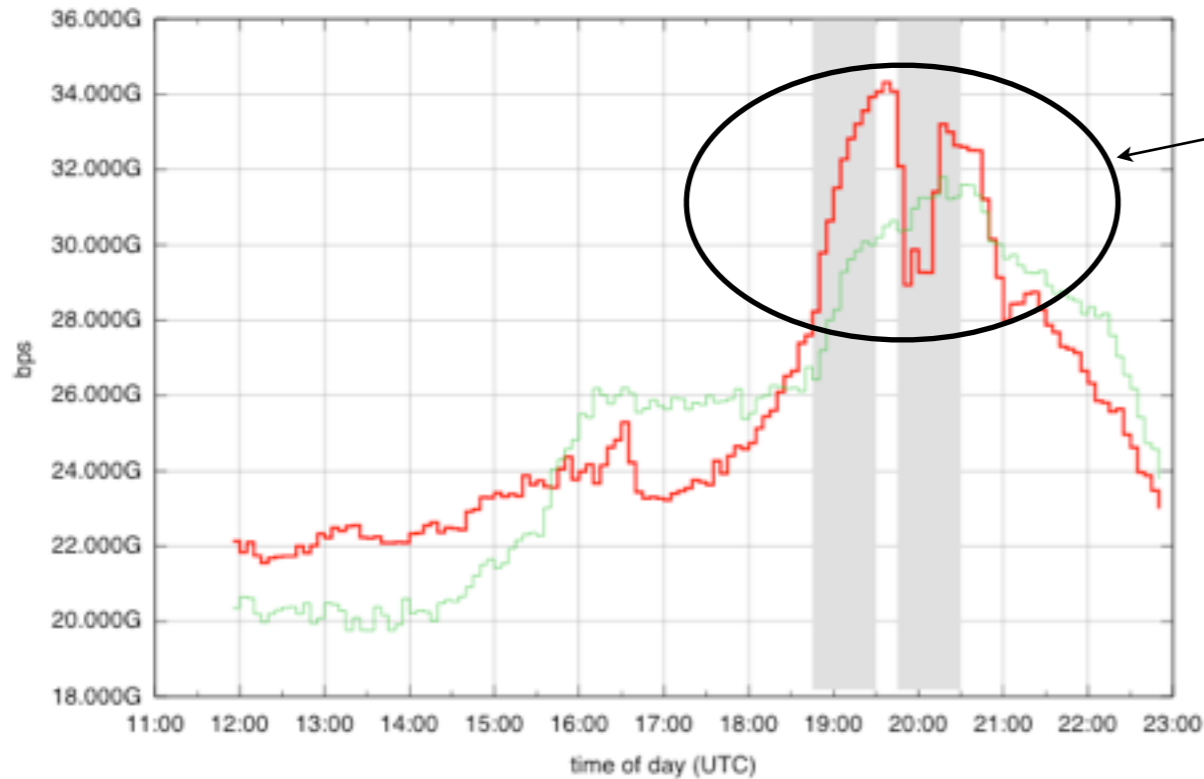
What is RIPE Labs?

- 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

<http://labs.ripe.net/>

IXP Traffic Levels During Major Events

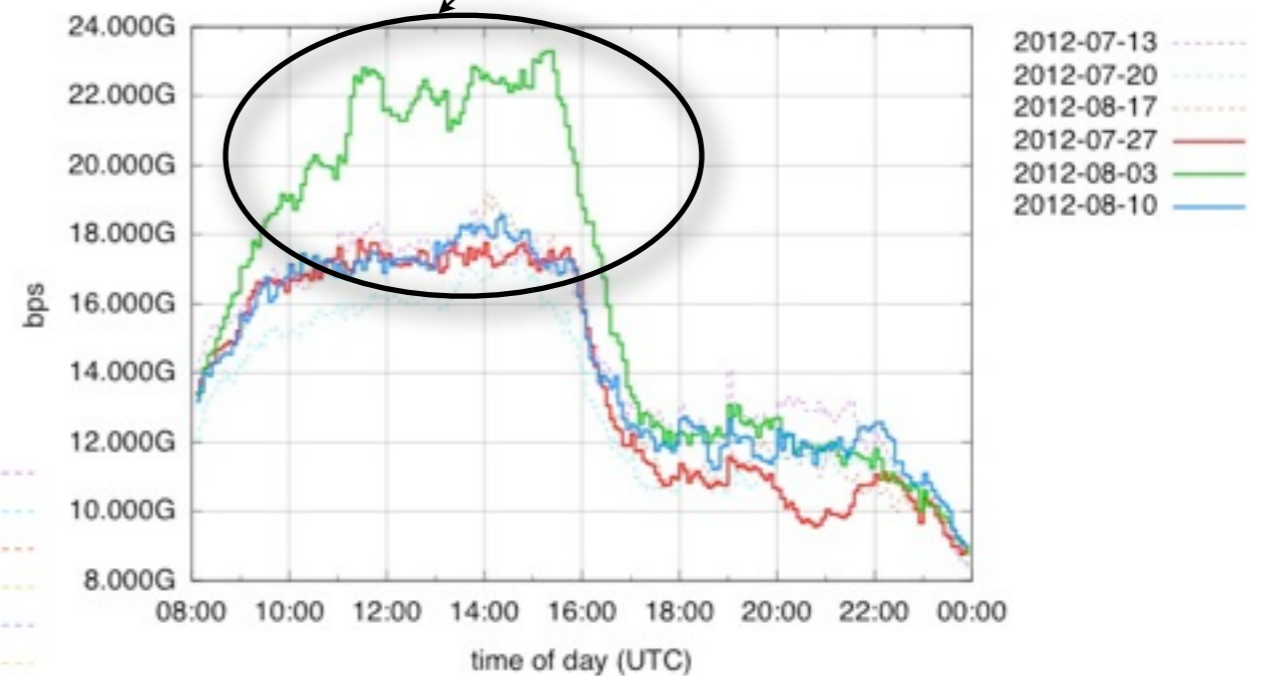
inex-ie traffic on 2012-06-18



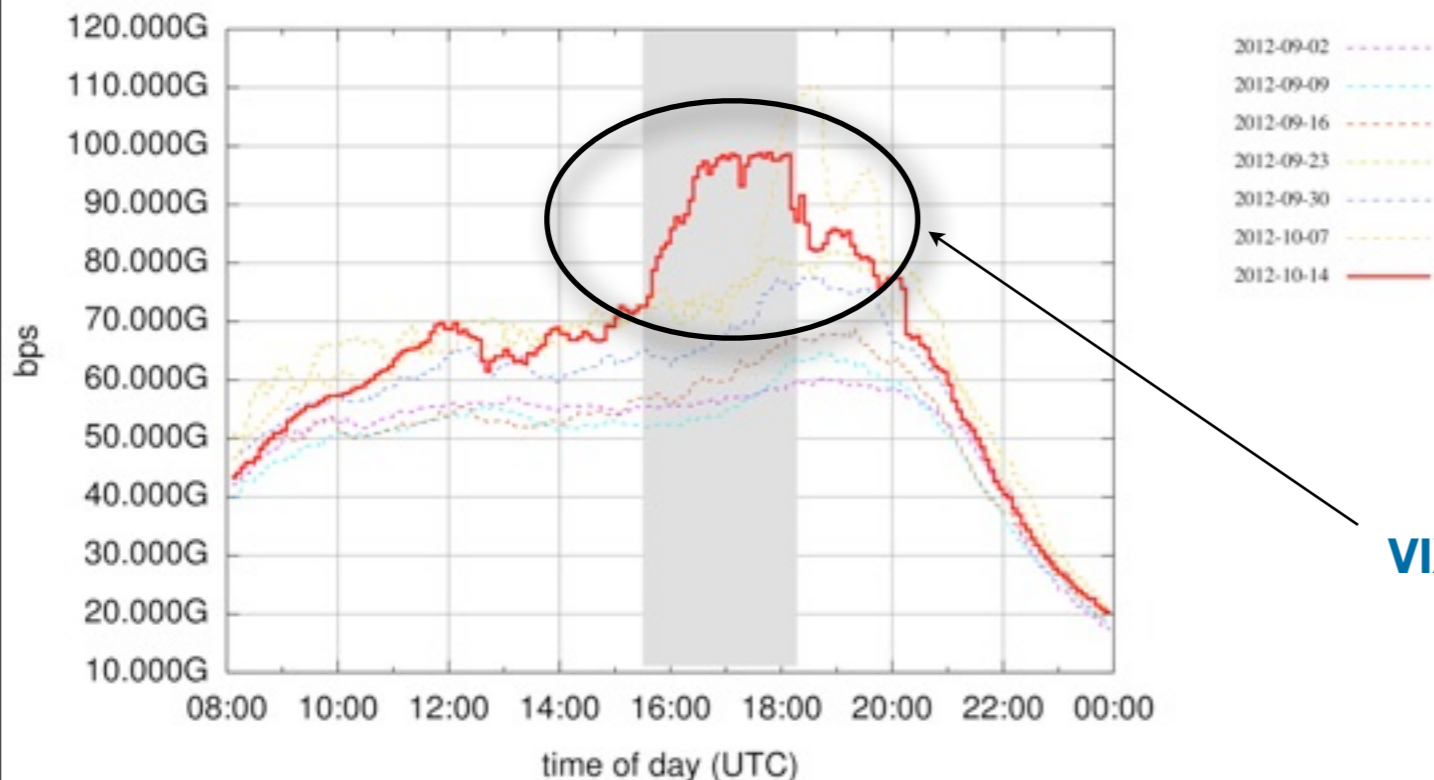
**INEX during Euro Championship
Ireland vs. Italy**

**LONAP during Olympics
(office hours)**

lonap-gb traffic on Fri



vix-at traffic on 2012-10-14 (solid line) vs. previous Sundays (dashed lines)

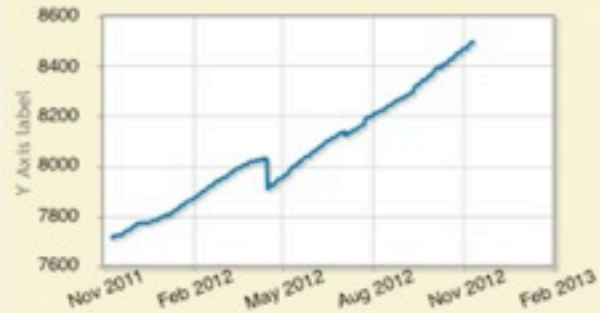


**VIX during Felix Baumgartner's
Skydive**



Statistics Dashboard

Total Number of LIRs

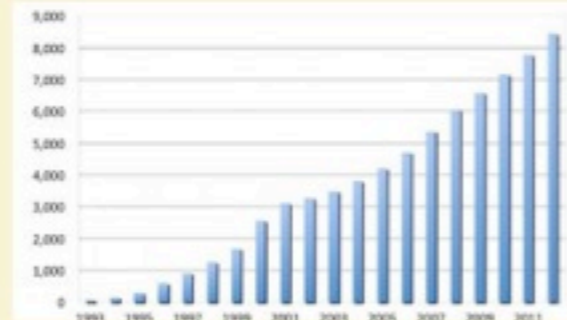


Current number of LIRs

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

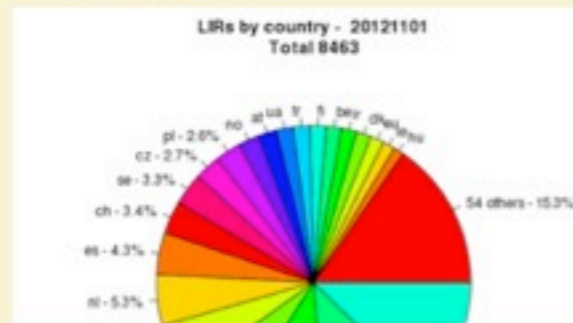


Number of Local Internet Registries (LIRs) in the RIPE NCC service region that have an IPv6 allocation (green line) and that don't have an IPv6 allocation (yet) (red line).

4630 | 3867

Tags: lirs ipv6

LIRs Sorted by Country

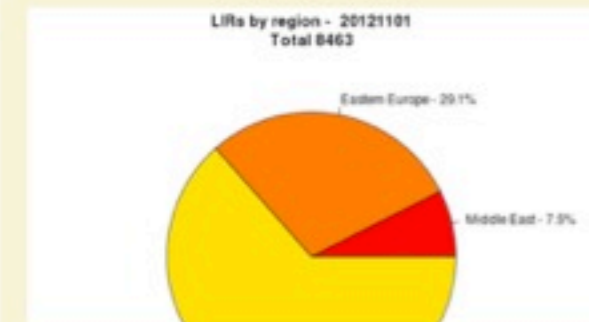


Current number of Local Internet Registries (LIRs) per country.

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.

- One page with various Internet statistics
- Automatically updated
- Each graph is tagged
 - Easier to navigate

<http://labs.ripe.net/statistics>

Questions?

